DOCUMENT RESUME

ED 393 345 HE 029 011

AUTHOR Dickey, Corinne Ann
TITLE The Role of Quality Mentoring in the Recruitment and Retention of Women Students of Color at the University of Minnesota.
PUB DATE Feb 96
NOTE 242p.; Doctoral Dissertation, University of Minnesota.
PUB TYPE Dissertations/Theses - Doctoral Dissertations (041) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC10 Plus Postage.
DESCRIPTORS Case Studies; College Students; *Females; Graduate Students; Higher Education; *Mentors; *Minority Groups; Program Design; School Holding Power; Socialization
IDENTIFIERS *University of Minnesota

ABSTRACT

In light of the importance of mentoring as a tool for social integration into the "organization culture," this research examined mentoring in academia among women at the graduate and undergraduate level in three programs at the University of Minnesota. The three programs were designed to recruit, retain, and graduate persons of color at the postsecondary level. The broad research questions examined how students and faculty/staff perceive the mentoring process, and how these perceptions illuminate the Quality Mentoring Model (QMM.) Using case study methodology, information was derived from 38 semi-structured interviews with students, faculty mentors, and administrators. Data were also obtained from questionnaires, demographic sheets, program documents, and statistical information. The study found that, in the program without any mentoring, peers perceived the need and served informally as mentors to one another. In the program that included a planned mentoring component the commitment to and degree of mentoring provided by faculty varied significantly. In the third program the coordinator served as a traditional, "one-way" type of mentor. The Quality Mentoring Model (QMM) was developed to emphasize the meaningful realities of the reciprocal nature of quality mentoring. Appendixes contain study materials and data. (Contains over 120 references.) (JB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 393 345

THE ROLE OF QUALITY MENTORING IN THE RECRUITMENT AND RETENTION OF WOMEN STUDENTS OF COLOR AT THE UNIVERSITY OF MINNESOTA

A THESIS
SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL
OF THE UNIVERSITY OF MINNESOTA
BY

CORINNE ANN DICKEY

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

FEBRUARY 1996

BEST COPY AVAILABLE

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Corinne Ann Dickey

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

HE 029 111

© Corinne Ann Dickey 1996

UNIVERSITY OF MINNESOTA

This is to certify that I have examined this copy of a doctoral thesis by

CORINNE ANN DICKEY

and have found that it is complete and satisfactory in all respects,
and that any and all revisions required by the final
examining committee have been made.

Caroline S. V. Turner

Name of Faculty Adviser

Caroline S. V. Turner

Signature of Faculty Adviser

2/29/96

Date

GRADUATE SCHOOL

ACKNOWLEDGEMENTS

This dissertation is the culmination of 5-1/2 years of doctoral-level study and research in Higher Education at the University of Minnesota. Throughout these years, I have received and benefitted from the encouragement and support of numerous colleagues, family members, and friends.

I would like to thank my adviser, Dr. Caroline Sotello Viernes Turner, for helping guide my studies and depthening my view of the fascinating world of qualitative research. I would also like to thank Dr. William Ammentorp for taking the time to read multiple drafts of this dissertation, each time offering wise, focused and challenging insights. A special thank you goes to Dr. Eugene Anderson, whose Mentoring Model was the inspiration for my own Quality Mentoring Model developed in the research. Throughout this process he was very supportive and asked particularly poignant questions. He has, indeed, been a true mentor. Dr. Josie Johnson's very life has been an inspiration to me. The Associate Vice President for Academic Affairs and Associate Provost with Special Responsibility for Minority Affairs brought meaning and direction to my research beginning at the first All-Campus Diversity Forum in 1990. Since that time she has been a constant source of encouragement, both academically and professionally. And, certainly, Dr. Frank Miller's influence on my life has been that he helped to build the foundation for my travel in and love of the diversity of different cultures. Many thanks are also due to the many students, faculty mentors, and administrators at Minnesota who took valuable time out of their busy schedules to share their thoughts and feelings about mentoring within the three programs that were the focus of this research.

My two daughters, Jodi Lynne and Heather Ann, never doubted that I would become "Doctor Mom." Most importantly, this whole process would not have happened without the loving and never-ending support of my husband and best friend, Dennis. I am forever grateful for all the long hours spent simply listening and just being there for me. Therefore, I dedicate this work to Denny.

ABSTRACT

As business literature has demonstrated that mentoring has proven to be a powerful tool for social integration into the "organization culture" in the business world (Burke, 1984; Clawson, 1980; Collins and Scott, 1978; Fagenson, 1989), this dissertation research examined mentoring within academia. Mentoring studies in higher education have been relatively few and have focused mainly on the undergraduate experience. This dissertation research examined both undergraduate and graduate programs, and was, therefore, designed specifically to fill an existing gap in the literature (Pascarella and Terrenzini, 1991).

This research focused on women in three different colleges at the University of Minnesota involving one undergraduate and two graduate programs that are designed to recruit, retain, and graduate persons of color at the postsecondary level. The current study describes mentoring in these programs. The broad research questions are: 1) How do students and faculty/staff perceive the mentoring process within these three University programs? and, 2) How do these perceptions illuminate the Quality Mentoring Model (QMM)?

The programs are different with respect both to level of mentoring and underrepresentation of minorities within the disciplines. Minority students and minority faculty are fairly underrepresented in Program A (master's degree level program in business) and mentoring is not a planned part of this program. Program B is an undergraduate summer mentoring program in biological sciences. Both minority students and minority faculty are greatly underrepresented in this field. In Program C (graduate-level program in education), students have to search individually to receive mentoring. Both minority students and faculty are fairly well represented, compared to the other two programs.

Using case study methodology, information was derived from 38 semi-structured interviews with students, faculty mentors, and administrators. Data were obtained from questionnaires, demographic sheets, program documents, and statistical information. Drawing upon the sociological theories of Tinto (retention) and Eriksonian psychosocial theory, the research expanded upon the contemporary Anderson-Shannon (1988) Mentoring Model. The Quality Mentoring Model (QMM) was developed to emphasize the meaningful realities of the reciprocal nature of quality mentoring.

Corinne Dickey

February 1996

Advisor: Caroline S. V. Turner

Professor Caroline Sotello Viernes Turner

TABLE OF CONTENTS

I. INTRODUCTION 1

- Statement of the Problem 8
- Focus of the Study 10
- Significance of the Study 13
- Limitations of the Study 15
- Organization of the Study 15

II. REVIEW OF THE LITERATURE 17

- Setting the Stage 20
  - Demographic, Social, Ethic, and Gender Considerations 20
- Mentoring: Background 30
- Mentoring: Foundation in Business 32
- Mentoring: Higher Education 34
  - Social and Academic Integration and Attrition 36
  - Informal Contact 37
  - Supportive Institutional Climate 38
- Toward a Comprehensive Definition of Mentoring 42
  - The Mentoring Relationship and Inherent Functions 43
  - Quality Mentoring Definition 52
- In Search of a Conceptual Framework 54
  - Mentoring Conceptual Framework Background 56
  - Sociological Theory Contributing to Mentoring 57
  - Psychosocial Theory Contributing to Mentoring 69
  - The Anderson-Shannon Model 75
- Quality Mentoring Model (QMM) 75

III. RESEARCH METHODOLOGY 80

- Rationale 80
  - Qualitative Research Methodology 80
  - Case Study Methodology 82
  - Potential Problems with Using Qualitative Research Methodologies 84
  - Specifics Related to this Dissertation Research 88

IV. CASE STUDY #1:
PROGRAM A – PROFESSIONAL MASTERS DEGREE PROGRAM 94
Description of the Program 94
Demographics of Student Respondents 97
Comparison of Undergraduate Institution with University of Minnesota 98
Socialization Factors: Personal and Academic 102
Respondents' Overall Evaluations of Program 108
Program A and the Quality Mentoring Model 110

V. CASE STUDY #2:
PROGRAM B – UNDERGRADUATE PROGRAM IN BIOLOGICAL SCIENCES 114

Description of the Program 114
Demographics of Student Respondents 118
Socialization Factors: Personal and Academic 124
Demographics of Faculty Mentor Respondents 127
Faculty Mentor Responsibilities: The Search for Definitional Elements 135
Program B and the Quality Mentoring Model 151

VI. CASE STUDY #3:
PROGRAM C – GRADUATE PROGRAM IN EDUCATION 155

Description of the Program 155
Demographics of Student Respondents 159
Comparison of Undergraduate Institution with University of Minnesota 161
Socialization Factors: Personal and Academic 166
Respondents' Overall Evaluations of Program 173
Program C and the Quality Mentoring Model 177

VII. SUMMARY, CONCLUSIONS, AND CHALLENGES TO THE INSTITUTION 181

Summary 181
Conclusions 190
Challenges to the Institution 196

REFERENCES 200

APPENDIX A 210

Interview Consent Form 211
Letter for Students 212
Letter for Faculty and Administrators 213

APPENDIX B 214

Administrator Demographic Data 215
Faculty/Mentor Demographic Data 216
Student Demographic Data 217

APPENDIX C 219

Administrator Interview Questions 220
Faculty/Mentor Interview Questions 223
Student Interview Questions 226

LIST OF FIGURES

1	The Educational Pipeline for Minorities	6
2	State Racial Make-Up	22
3	The Mentoring Relationship and Co-existing Factors Leading Toward Student Success	35
4	Primary Functions of Advisor and Mentor	46
5	Quality Mentoring Characteristics	55
6	Anderson and Shannon Mentoring Model	76
7	Quality Mentoring Model (QMM)	78
8	Program A	95
9	Program B	116
10	Program C	156

LIST OF TABLES

1	Goals of the Mentoring Process	19
2	Total Graduate School Enrollments, University of Minnesota as of October 1, 1995	23
3	Total Graduate Degrees Received by Graduate Students of Color, by Year, University of Minnesota	25
4	Distinguishing Functions/Characteristics of Advising, Mentoring, and Support Systems	44
5	An Eclectic Profile of Mentor–Protege Relationships	49
6	Benefits and Responsibilities of the Quality Mentoring Relationship	50
7	Summary of Longitudinal Student Demographic Information (June 1992–December 1995)	123
8	Summary of Faculty Mentor Demographic Data	150

CHAPTER I

INTRODUCTION

Improving the retention and graduation of persons of color is a challenge to U.S. higher education institutions. Since its earliest beginnings, America's educational system "has been deeply committed to the maintenance of racial and ethnic barriers" (Weinberg, 1977). The success of the nation's schools in educating persons of color will influence the make-up of the American work force and enrollments in colleges and universities in the decades to come.

However defined, diversity in academe generally has been granted high priority, yet it seems *increasingly* difficult to achieve. An article appearing in the July 26, 1989 issue of *Chronicle of Higher Education* discusses a survey conducted by the American Council on Education which included for the first time questions on minority recruiting at the college level. The article indicates the vast majority of colleges across the nation are attempting to increase the numbers of minority students on their campuses, but success is modest, at best. It stressed that colleges must provide a hospitable climate for minorities if they are to be retained through to graduation. That climate includes the use of more minority faculty (page A27).

The University of Minnesota, a large land-grant university, and the site of this research, has a commitment to diversity and to improving its ability to recruit and retain students and faculty of color. For example, University leadership has established the following system-wide goals:

1. Improve the retention of students of color by 50 percent of the current base by 1994;
2. Double the hiring of faculty of color by 1994;
3. Increase the enrollment of students of color to 10 percent of total University enrollment by 1994;

4. Strengthen the University's ongoing and new efforts to make diversity integral to academic priorities.

One significant issue the goals present is how they are to be achieved. This dissertation research specifically focuses on mentoring in higher education and is aimed at increasing the information base so that the University can improve effectiveness in recruiting, retaining, and especially in graduating women and all students of color. This research starts with the position derived from current literature that mentoring is part of the important institutional dynamic of social integration of students.

Mentoring is an attractive approach to meeting the needs of students who are most at risk of leaving the university before graduation. It can improve retention rates by addressing some of the causes of attrition among these culturally diverse students. Perceived as acting in direct parallel to the University of Minnesota's commitments as expressed, my research specifically investigates mentoring processes that may be integral factors in effective strategies for increasing the successful recruitment and retention of students of color.

Mentoring is a process that could contribute to increasing the recruitment and retention of minority students in colleges and universities through to graduation, but can also contribute to the numbers who enter and complete graduate training, are hired for faculty positions, and are retained as contributing members of the academy (Blackwell, 1989).

However, "mentoring" is a term involving process, institutional dynamics, social environment, and historical precedent. One of the tenets underlying this research is that mentoring cannot be accurately defined without serious attention to these contributing factors. Accordingly, my research focuses on and examines three programs at one university in the early 1990's, while reflecting on the broader historical setting in society in which different forms of mentoring have evolved.

Historical Setting

Postsecondary education in America is the largest and most diverse system of higher education in the world (Trow, 1989). The modern American system of higher education came of age in the years following World War II. It was rooted in the premise that a period of significant growth lay ahead; a period of increasing resources and rising numbers of students. In fact, Parsons and Platt (1970) stated that mass higher education created a social situation in which colleges and universities became the primary vehicles of a newly emergent phase ("studentry") in the socialization process. Moreover, higher education was grounded in a postwar vision of America that anticipated major changes in social, economic, technological, political, and even demographic trends (Arthur Levine and Associates, 1989). Tensions in higher education accompanied these changes.

On the surface, the 1960's and 1970's were a positive time for those committed to expanding minority[1] access to higher education. The establishment of a variety

---

[1]For purposes of this research, the standard ethnic categories used by the University of Minnesota are applicable as follows:

African-American (non-Hispanic origin): A person having origins in any of the black racial groups of Africa (excluding persons of Spanish, Portuguese, Latin American, or other Hispanic origin).

American Indian or Alaskan Native: A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

Asian or Pacific Islander: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This includes, for example, China, Japan, Korea, India, the Philippine Islands, and Samoa.

Chicano: A person of Mexican-American origin who prefers to be known as Chicano rather than Hispanic.

Other Hispanic: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race.

White (non-Hispanic origin): A person having origins in any of the original peoples of Europe, North Africa, or the Middle East (excluding persons of Spanish or Portuguese origin).

I will, however, use the terminology used by various researchers in an effort to maintain contextual cohesiveness. Clarification will be made where appropriate.

of programs, a major expansion of federal and state scholarship assistance for low-income students, and new efforts on many campuses to recruit and retain more nonwhite students were just a few of the initiatives emphasized during this period. Minority enrollments began to climb. However, college access for minorities persistently remained a problem. Upon closer inspection, researchers found that minorities were not entering the *same kind* of colleges as Whites.

Researchers found consistently that a declining number of minority high school graduates went on to four-year institutions. The reason for this is believed to be that the majority of persons of color who did go on to college were oftentimes mainstreamed into community colleges, where few transferred successfully to four-year institutions (Astin, 1985; Orfield, 1986:9-10).

Further, those minorities who today enter and graduate from college tend to be concentrated in certain fields of study. For example, for persons receiving doctorates in 1993, 9.3 percent of education doctorate degrees were awarded to Blacks, while for this same minority group, only 1.9 percent received degrees in engineering and 1.5 percent in physical sciences. Hispanics comprised 4.1 percent of doctorates in arts and humanities, but only 2.4 percent in engineering and 3.0 percent in physical sciences. On the other hand, Asian Americans received 19.5 percent of the engineering doctorates and 11.2 percent of physical science doctorates, and only 2.4 percent of education and 3.5 percent of arts and humanities doctorates. American Indians were below 1 percent of doctoral recipients in all fields (e.g., 0.3 percent in arts and humanities, 0.8 percent in education, 0.1 percent in engineering, and 0.3 percent in physical sciences, *The Chronicle of Higher Education*, October 12, 1994).

This article stated that:

> Members of minority groups earned 10 percent of the Ph.D.s awarded in 1993 to 26,386 U.S. citizens. African Americans earned 1,106 or 4.2 percent of the doctorates granted to Americans; Asian Americans earned 891, or 3.4 percent; Hispanic Americans earned 834 or 3.2 percent. White Americans earned 23,202, or 88 percent. American

> Indians were the only minority group to lose ground. They earned 120 doctorates in 1993--29 fewer than the previous year and 0.5 percent of the total (Leatherman, October 12, 1994).

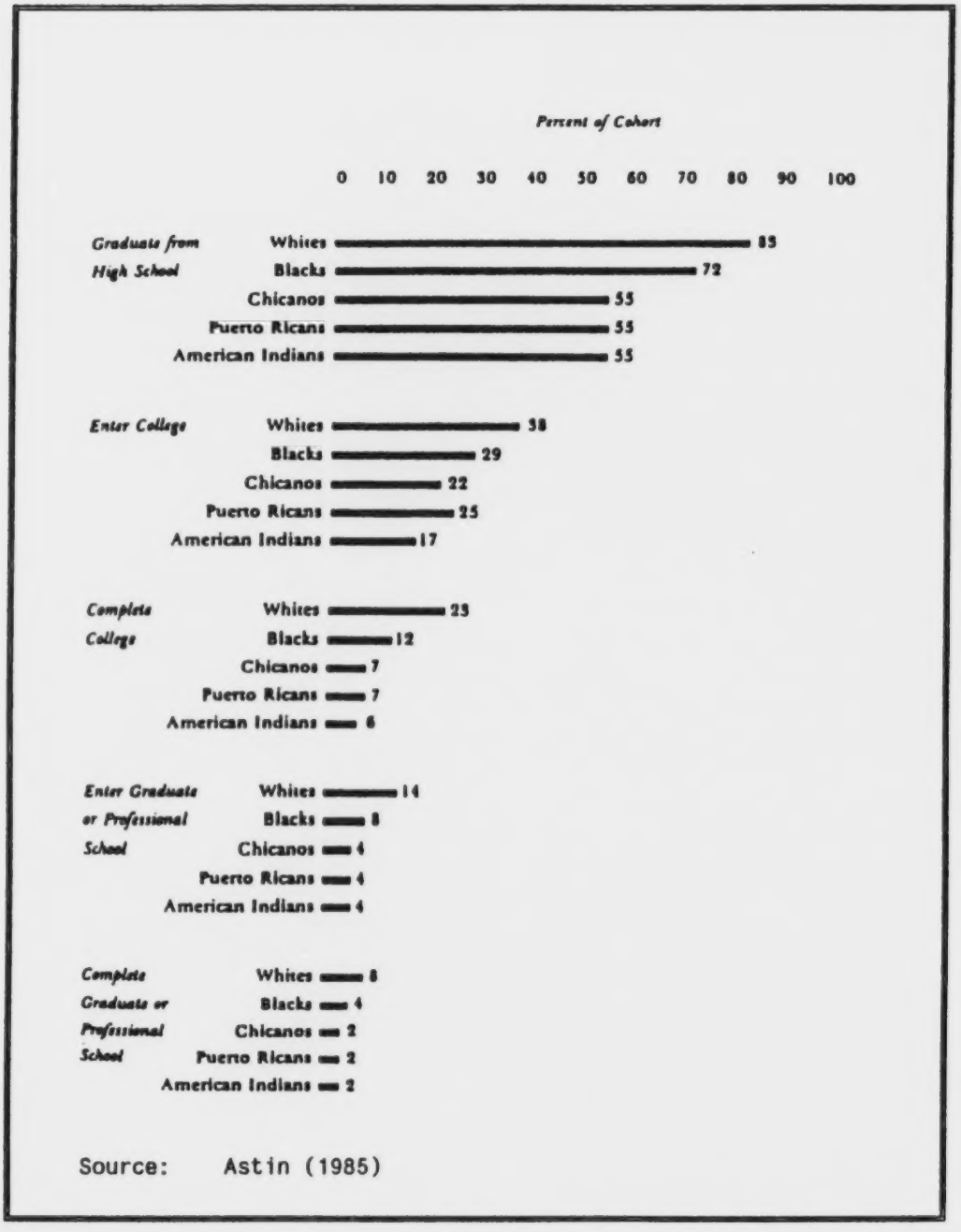
As can be discerned from the information in Figure 1, "The Educational Pipeline for Minorities" (Astin, 1985:175), all minority groups are increasingly underrepresented at each transition point in the higher education system. (**Note**: Astin's ethnic categories specify "Puerto Rican" but do not include "Other Hispanic" ethnic groupings. Also, he does not include "Asian or Pacific Islanders" in this study). Astin (1985) found, for example, that Whites were much more likely to complete a bachelor's degree in four years than Hispanics and American Indians (who had the lowest rates) and Blacks (who fell in between).

Astin (1985) views the educational system as a kind of "pipeline" which can theoretically lead to positions of leadership and influence. He identifies five "leakage" points at which disproportionately large numbers of U.S. minority students drop out of the pipeline: 1) completion of high school; 2) entry to college; 3) completion of college; 4) entry to graduate or professional school; and, 5) completion of graduate or professional school. He states that "the loss of minorities at these five transition points accounts for their substantial underrepresentation in high-level positions" (page 174). He summarizes this data as follows:

- All four of the minority groups under consideration in this study are increasingly underrepresented at each higher level of degree attainment: high school completion, baccalaureate attainment, and advanced degree attainment.
- Minority underrepresentation is attributable not only to greater than average attrition rates from secondary school, undergraduate college, and graduate and professional school, but also to disproportionately high losses in the transition from high school to college.

FIGURE 1

The Educational Pipeline For Minorities



Source: Astin (1985)

- Blacks fall midway between Whites and the three other minority groups in terms of their ability to survive to the end of the educational pipeline.
- The single most important factor contributing to the severe underrepresentation of Chicanos, Puerto Ricans, and American Indians is their extremely high rate of attrition from secondary school. The second most important factor is their greater than average attrition from undergraduate colleges (particularly community colleges).

Astin (1985) developed this pipeline theory ten years ago. It is still very much the case today. For example, in discussing African American students, Holland (1994) makes reference to the pipeline as follows:

> studies have found colleges and universities have lost ground in the enrollment of African American graduate students . . . in the proportion of African American graduate and doctoral degrees granted . . . and in the participation by African Americans in research and faculty positions in its universities. . . . It is the belief of many scholars that the pipeline from which African American faculty are produced is drying up. Common explanations for the low flow of minorities in the pipeline . . . [is] that in general academe has been inhospitable towards African American students (page 2).

Holland (1994) makes the connection between the relatively few minorities in higher education and the importance of social interactions (such as mentoring) when he states:

> limited interactions with the major advisor, the formal structure of the infrequent encounters, and the basic and routine academic guidance provided to the doctoral student render the involvements non-developmental. In these involvements, the advisor is not involved in nurturing or grooming the doctoral student (p. 8).

STATEMENT OF THE PROBLEM

Given the breadth of many perspectives of the mentoring process currently, this research focuses on three programs at one large, urban university and, using case study methodology, looks closely at the ways in which student/faculty/staff interactions are perceived and interpreted by students (proteges) and those faculty/staff who are in mentoring roles. Putting mentoring "under the microscope," and analyzing its effects are what comprise this study. Specific problems this research addresses can be identified as follows:

1) Providing Research. Cutbacks in funding during the 1980s caused a sharp decline in research in higher education. It was during this same period that increased recognition of and emphasis on mentoring expanded outward from the business world into the academy. Merits of mentoring in higher education environments did not receive early research emphasis that might have been possible in a time of larger research budgets. This has resulted in a gap in the literature (Altbach and Lomotey, 1991) on crucial mentoring research (Problem #1). This present research is specifically designed to help fill part of that gap.

2) Workable Definition. Another major problem confronted during this research has been the conspicuous absence of one, comprehensive definition of mentoring (Problem #2). Currently, there probably are as many definitions of mentoring as there are research studies. How, then, is one to conduct research on the mentoring process without a workable definition?

In order to overcome this problem, and as a result of in-depth research on mentoring, a brief, yet detailed summary of the multiplicity of definitions of mentoring has been compiled (see Table 1, "Goals of the Mentoring Process" in the Review of the Literature section), and a practical definition of mentoring as it relates to this research has been carefully constructed. The new definition takes into account what this researcher considers to be the most realistic of the mentoring definitions established to date, but, more importantly, it recognizes a

critical component of pragmatic effectiveness which has neither been adequately emphasized nor thoroughly considered in any of the mentoring research examined; namely, the *reciprocal* aspect of the mentoring relationship. *Quality mentoring* is definitely a "two-way street" between mentor and protege and this is supported by the present research.

3) Comprehensive Model. Another problem encountered (Problem #3), and one which is directly related to the definition problem, is the lack of a comprehensive model of what may be termed "mutual mentoring" or what I have termed quality mentoring. Due to the reality that all human communication is interactive, and because current research does not provide a conceptual framework describing in detail an adequate model of mentor-protege reciprocity during interaction, it has been necessary to develop a more accurate model.

The research examined for the literature review indicates that the responsibility for mentoring outcomes basically rests with the mentor. The role of the protege is neither fully considered nor thoroughly discussed. Conversely, my conceptual framework, the **Quality Mentoring Model (QMM)**, recognizes that mentor behaviors cannot be separated from protege behaviors. The behaviors of each are in some manner related to the behaviors of the other (reciprocal).

Drawing on Eriksonian psychosocial theory as a core, the earlier Anderson-Shannon (1988) Mentoring Model is expanded to emphasize the realities of the reciprocal nature of quality mentoring. In addition, certain organizational considerations and administrative implications of mentoring in the higher education institution are explored using perspectives of Tinto's attrition theory.

The broad research questions the data in these case studies confront are:

1) How do students and faculty/staff perceive the mentoring process within three University programs designed especially for the recruitment and retention of persons of color?

2) How do these perceptions illuminate the Quality Mentoring Model (QMM)?

FOCUS OF THE STUDY

Mentoring addresses several causes of student attrition and delayed graduation, including the lack of proper academic preparation for college, the lack of knowledge about or access to social, academic, or financial resources, and the absence of a comfortable psychological milieu for matriculation (Gavin, 1989; Stampen & Cabrera, 1988). Based on the literature review, an assumption made in this present research is that faculty contact has a significant impact on the academic and social integration of students enrolled in colleges and universities. It is reasonable to assume, then, that the quality of faculty contact in the form of mentoring may have a significant impact on women students of color, the focus of this present study.

It is important to see this research within the context of the issues that most continuously confront the mentoring process. Universities throughout the country are experimenting with "planned mentoring" to improve both retention and delayed graduation rates in circumstances of demographically underrepresented students, faculty, and administrators. But how is mentoring manifested in the higher education environment? What constitutes quality mentoring? What specifically are the salient features and functions of quality mentoring?

Blackwell (1989:10-11) concludes that quality mentoring occurs when mentors perform a multitude of functions for their proteges. Some of these functions include: 1) providing training; 2) stimulating the acquisition of knowledge; 3) providing information about educational programs; 4) providing emotional support and encouragement and helping the protege develop coping strategies during periods of turmoil; 5) socializing proteges regarding the role requirements, expectations, and organizational imperatives or demands of the profession; 6) creating an understanding of the educational bureaucracy and the ways one can maneuver within that system; 7) inculcating, by example, a value system and a professional work ethic; 8) providing informal instructions, again by example, about

demeanor, etiquette, collegiality, and day-to-day interpersonal relations; 9) helping the protege build self-confidence, heighten self-esteem, and strengthen motivation to perform at one's greatest potential; and 10) defending and protecting the protege, correcting mistakes, and demonstrating techniques of avoiding unnecessary problems.

Blackwell's (1989) mentoring functions listed above have proven useful in designing and writing the questions for the mentoring portion of the interview protocol for both students and mentors in this present research. Too often in the past, many individuals have had neither a focused idea as to just what constitutes a mentoring relationship nor a clear definition of their roles as mentors or proteges. Blackwell's list is complete enough to provide necessary latitude, yet is specific enough to give needed focus.

University of Minnesota circumstances and conditions present a unique opportunity to study specific programs whose goals are to increase the institutional participation of persons of color. The three programs investigated (one undergraduate and two at the graduate level) are designed especially for the recruitment and retention of persons of color at the University of Minnesota, a large, Upper Midwestern land-grant university. A central objective of the present research study is to compare and contrast the pragmatic effects, if any, of the mentoring processes in three specific higher education programs at the University of Minnesota.

Due to the aforementioned national trend toward minority students' disproportionate concentration in specific fields, this current effort investigates three fields of study, two of which have limited minority student participation (biological sciences and business administration). Minority student and faculty representation is relatively greater in the third field (education).

Through qualitative case study methodology, participants in this research study speak at considerable length regarding their views of the mentoring process,

where it exists, and equally at length about problems when quality mentoring is absent. Assumptions in the research are: 1) participants say what they mean and mean what they say; 2) if they state that features of mentoring had an important and positive impact on their lives, their comment is accepted as a positive view of a mentoring function; and, 3) if they state that their mentor did not help them, their comment is accepted as a negative view of a mentoring function. (**Note**: If the interviewee (either student or "mentor") stated that mentoring did not occur, this was pursued further by additional questioning for added insight).

General characteristics of the faculty and students do not radically differ within their respective groups; however, each program has distinctly different levels of mentoring. Sample size is adequate so as to be representative and is detailed within the individual case studies. The *kind* of mentoring relationship experienced (or not experienced) is examined and dominant trends in student and faculty/staff perceptions of the mentoring process are described.

Where mentoring existed (as determined by answers provided to questions about mentoring in the interviews), an effort was made to interview both mentor and protege. In certain cases it was not possible to interview each member of all "pairs." In only a small number of the total group of interviewees, some students were interviewed but their mentors were not. In another small number of cases, mentors were interviewed but it was not possible to reach the paired student.

Students, faculty, and administrators were interviewed in all three programs for the specific purpose of comparing and contrasting their perspectives of the mentoring process and its existence or non-existence in each particular program. In addition, data were obtained from written documents and individual program statistics. Thus, triangulation, or the process of identifying dominant trends emerging from multiple data sources (Yin, 1989) was achieved, thereby adding to the construct validity of the study.

SIGNIFICANCE OF THE STUDY

This dissertation research is intended to make several contributions to higher education. First, it may contribute to the development of University planning to improve the recruitment and retention of women students of color.

In business organizations there exists a considerable body of current literature documenting the contributions of mentoring to valued employee integration (Burke, 1984; Clawson, 1980; Collins and Scott, 1978; Fagenson, 1989; Sodano and Baler, 1983). Research cited indicates that integration of organization participants as fully as possible into the system and activity of the organization has significantly influenced valued outcomes. Since mentoring has proven to be such a powerful tool for social integration into the "organization culture" in the business world, this present research examines certain functions of this variable within a sector of academia. This research attempts to facilitate and expand this understanding of the mentoring process forward into higher education.

A second important contribution of this research is to simultaneously define mentoring in a comprehensive manner and to use that definition to suggest a new model emerging from the results of the present research.

As mentioned earlier, there are many definitions of mentoring, but none met the requirements of the present research study. Also, a comprehensive model of mentoring, and in particular quality mentoring, did not exist. Once the larger social context was understood, and the circumstances and conditions of the higher education institution were examined, it was possible to develop a definition and goals of mentoring, both within individual relationships as well as on the programmatic level.

Third, the mentoring process can help to expand an academic and social milieu where diversity is valued. Thus, the university may be strengthened in attracting more underrepresented students and faculty, more majority faculty members will become sensitized to the experiences of students and faculty of color,

a larger number of underrepresented students will be supported through to graduation, and contributions can be made so that racial and cultural groups will be strengthened in certain ways both socially and, eventually, economically. Furthermore, using this form of emphasis on interpersonal interaction, cooperative problem solving, and cross-cultural understanding, the institutionalization of mentoring can contribute to creation of a university setting in which diversity is not only valued but expected.

This research, however, certainly must be understood within the context of a much broader setting. If mentoring programs are to be successful in a climate of ethnic pluralism, formal commitment of each institution to specific goals of retention, mentoring, and diversity pertinent to its circumstance and location is critical. The commitment may come in the form of mandated policy statements, financial support, and allocations of space, personnel, and communication structures. In addition, the inclusion of mentoring as an acceptable service activity for faculty promotion and tenure can be an excellent signal that the university community views mentoring as truly important. In any U.S. higher education institution, mentoring activities need not only to be *recognized* but to be *rewarded* as well if they are to achieve the goals set for them.

Fourth, research into mentoring in higher education and the resulting research literature have both been limited. Where it does exist, most of the research to date on social integration and the mentoring factor in American higher education has examined the undergraduate experience. This research is deliberately intended to expand knowledge in this area by investigating the mentoring socialization factor for women students of color in special programs in *both* undergraduate and graduate education. This present research, then, will make a valuable contribution to an area of research that is yet to be investigated comprehensively.

LIMITATIONS OF THE STUDY

As is the nature of case study research, the relatively small number of case study sites and interviews in this investigation limits the generalizability of findings and conclusions. This study emphasizes a *depth* of understanding of varying levels of mentoring within three programs at one institution, as opposed to the *breadth* of survey data from what might otherwise be a larger sample using a different methodology.

Also, the potential for researcher bias must be acknowledged, especially given this researcher's many years of experience as an administrator within the large institution under study. This potential problem has been dealt with by purposely choosing programs that are completely outside my jurisdiction. Also, as explained earlier, triangulation has been an important technique in this study and has been managed carefully to avert researcher bias.

ORGANIZATION OF THIS STUDY

The remainder of this study is organized in the following manner. First, in Chapter 2, Review of the Literature, the stage is set by providing detailed demographic, social and ethnic, and gender considerations for minorities. Following that, an introduction to the divergent ways in which various forms of mentoring have been examined recently is provided. The review also presents a brief summary of the multiplicity of features of mentoring described by other researchers. On the basis of this body of literature, a theoretical framework is presented that is later compared to the findings of this research. In addition, in this present study a definition of quality mentoring is developed based on descriptions from the literature, analysis of programmatic documentation, as well as from interviews of faculty, student, and program administrator respondents.

Chapter 3 details the qualitative case study research methodology by which data were gathered, analyzed, and presented. Descriptions of the three programs

studied as well as detailed results from the data analysis are presented in Chapters 4, 5, and 6. These three case study chapters also contain an analysis of the roles and perceptions of the mentors and proteges in all three programs, and a comparison of findings to the theoretical framework. This study concludes in Chapter 7 with a summary of findings and certain suggested implications for university administrators undertaking the challenge of diversity and social integration of persons of color through mentoring.

CHAPTER II

REVIEW OF THE LITERATURE

As will be shown in this literature review, the mentoring process can help to create an academic and social milieu where diversity is valued. Thus, theoretically, if mentoring is taken seriously and is institutionalized, the University of Minnesota will be able to attract more underrepresented students, more faculty members will become sensitized to the experiences of students of color, a significant number of underrepresented students will be able to graduate, and racial and cultural groups will be strengthened socially and, eventually, economically. Furthermore, with this emphasis on interpersonal interaction, cooperative problem solving, cross-cultural understanding, and institutional commitment, mentoring helps to create a University setting in which diversity is not only valued but expected.

The conservative mood of the 1980's manifested a decline in educational research support and crucial investigations into the condition of minorities in higher education. This, unfortunately, has left "gaps" in the literature (Altbach and Lomotey, 1991). This present research is specifically designed to fill certain of these gaps.

In addition, to facilitate the University of Minnesota's strategic planning which is crucial to the successful recruitment, retention, and graduation of minority women in undergraduate and graduate level programs, this present research establishes, for the first time, a considerable body of scientific data on mentoring derived at this institution that can be used to enable meaningful policy and procedural decision making.

This present research has its foundations in certain aspects of the nature of the U.S. higher education institution and in both psychosocial and sociological theory. In particular, mentoring is examined from these perspectives and a conceptual framework is built drawing from relevant theoretical constructs. It

should be noted here that the objective of this present research is not to compare and contrast the theories of Erik Erikson (psychosocial), and Vincent Tinto (sociological). Rather, salient and pertinent features from each are selectively identified because of their applicability, wide acceptance, and capacity to elucidate the model and conceptual framework that are developed in this present research.

This section will review a considerable number of studies on mentoring. In each, the author has given his or her own definition for mentoring. As can be seen in Table 1, "Goals of the Mentoring Process," a wide range of goals for the mentoring process exists. While the complexity and potential of the mentoring process is recognized, this researcher focuses on the absence of a comprehensive definition of mentoring. The state of current knowledge presents a need for that comprehensive but workable definition. One goal of the present effort is to contribute to the discussion of what mentoring is and what it is not.

Previously, there has been neither one, comprehensive definition of mentoring upon which all researchers agree nor one class of mentoring that describes all types of academic mentoring relationships (Noe, 1988). In fact, currently there are as many definitions of mentoring as there are research studies. Mentoring has been described as having many divergent purposes and widely differing content.

What does it mean to be a mentor, to provide mentoring? If features of mentoring impact relationship outcomes, what are those features? What is **quality** mentoring? Has mentoring's evolution from the commercial sector to the academic sector radically changed its content? These are significant questions proximal to the area in which this current research is conducted.

Because mentoring has been described as having many divergent purposes and widely differing content, this review of the mentoring literature provides an investigation and thus a foundation for the development of a new, comprehensive definition of mentoring. That definition is conceived of as not only appropriate for

TABLE 1

Goals Of The Mentoring Process

- Career development (Merriam, et al., 1987; Bova and Phillips, 1984)
- Professional and/or personal development (Anderson & Shannon, 1988)
- Individual growth [maturity] (Levinson, 1978)
- To facilitate wise and friendly counsel (Redmond, 1990b)
- To provide social and emotional interaction which makes transfer of marketable, often discipline-based skills, behaviors, and attitudes possible (Hill, 1989)
- To address causes of student attrition (Gavin, 1989; and, Stampen and Cabrera, 1988)
- To provide training, stimulate acquisition of knowledge, provide emotional support and encouragement, provide academic and personal socialization, build self confidence, defend and protect protege (Blackwell, 1989)
- To provide long-term commitment, with profound impact and a reciprocal nature (Healy and Welchert, 1990)

Note: Except for the last goal, these goals appear to be the responsibility of the mentor who is expected to provide support to the protege.

purposes of this research, but one which may be applicable to other arenas as well and thus, may add one aspect of generalizability to the present research.

SETTING THE STAGE

Demographic, Social, Ethnic, and Gender Considerations

Demographic Considerations. Changing demographics will have a greater immediate impact upon the nation's educational institutions than any other sector of American society (Nettles, 1991; Miller, 1994). For example, minorities presently constitute 26 percent of the U.S. population and forecasts estimate that one in three Americans will be a person of color by the turn of the century (Abraham, *et al.*, 1994). Further, about 46 percent of school-age youths will be students of color by the year 2000. Today's minority elementary school students will comprise a much larger share of the work force and of college and university enrollments from the year 2000 and beyond than minorities represent today (Nettles, 1991).

In sharp contrast to this influx of students of color is the expected decline in teachers of color--from about 12.5 percent of the nation's teachers in 1980 to about 5 percent by the year 2000 (American Council on Education and the Education Commission of the States, cited in Banks, 1991, p. 136).

The rapid growth of the Hispanic population in the United States is one of the most compelling social developments in the last 25 years (Arias, 1986). It is presently the second largest minority group and this population has been growing five times as fast as the overall population in the 1980's (Orfield, 1986). At the current growth rate (estimated at between 2.2 percent and 3.5 percent per year), the Hispanic population will double in 20-25 years (Estrada, *et al.*, 1981).

Despite more than a 50 percent increase in the Latino population, these college students made up only 4 percent of college enrollments in 1980. This increased to 5.2 percent in 1989. Latinos received only 2.7 percent of earned

doctorates in 1989 and constituted only 2 percent of the faculty population (Nettles, 1991).

In 1968, there were more than three times as many Blacks as Hispanics in the school population. In 1986, the Hispanic enrollment was nearly two-thirds that of the Black enrollment. During this same time period, there was one Hispanic student for every 17 White students in 1968, and one for every seven in 1986. If these trends continue, it is probable that Hispanics will fundamentally change the social structure of American education (Orfield, 1989). At least one researcher believes that they may well displace Blacks as the nation's largest minority in the near future and that the proportion of Whites will fall substantially (Orfield, 1986, 1989). All signs are that these changes are continuing.

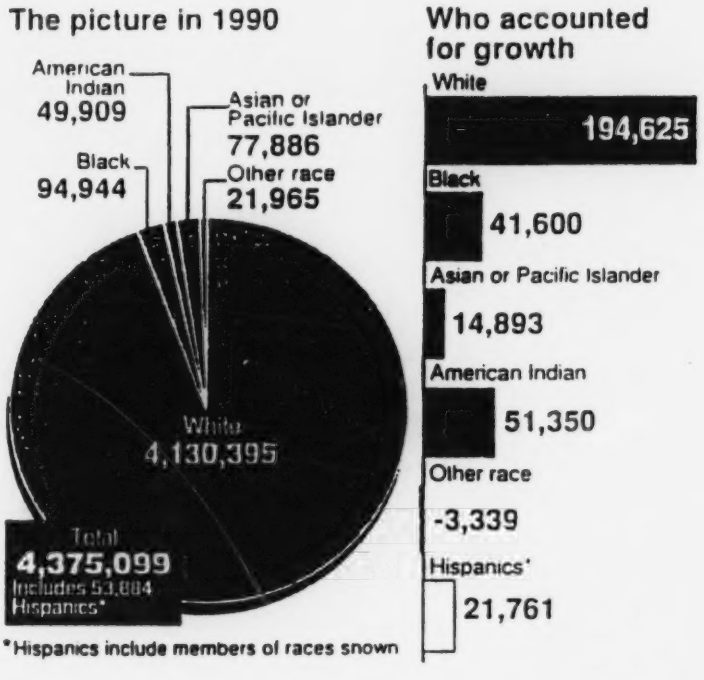
State Demographics. Pertinent 1990 census figures for the State of Minnesota appeared in a report entitled, "Minority Population Growth is Changing the Face of State" (Klauda and Kelly, 1991). This article states that during the 1980-1990 decade, "the state grew by about 300,000 people, including 100,000 Blacks, American Indians, and Asian Americans. The Hispanic population grew by nearly 22,000" (see Figure 2, "State Racial Makeup"). The article's researchers show that 21.6 percent of the population of Minneapolis and 17.7 percent of St. Paul's population are racial minorities.

The Twin Cities Campus of the University of Minnesota achieved the goal of 10 percent students of color (total undergraduate and graduate students) Fall 1992. However, the percentage of *graduate students of color* (excluding international students and "undeclared" categories from Table 2, "Total Graduate School Enrollments, University of Minnesota as of October 1, 1995") is approximately 9 percent (1,005/10,885). If these two categories are included, the number drops to only 7 percent.

Presently, according to figures obtained from the University of Minnesota Graduate School Office of Data Management Fall 1995, 6.05 percent of graduate

FIGURE 2

State Racial Makup



Source: Klauda, P. and S.P. Kelly (1991). *Star Tribune*, February 22, 1991, Minneapolis, Minnesota, p. 10A

TABLE 2

Total Graduate School Enrollments
University Of Minnesota As Of
October 1, 1995

Student-Declared Ethnic Background	Females	Males	Total
Caucasian	5,044	4,836	9,880
American Indian	47	33	80
Asian American	224	260	484
African American	150	120	270
Chicano	25	24	49
Hispanic	56	66	122
International	899	1,778	2,677
Undeclared	97	134	231
TOTALS	6,542	7,251	
		GRAND TOTAL	13,793

Source: Judy Howe, Data Management Office, Graduate School, University of Minnesota, Minneapolis, Minnesota, personal communication, October, 1995

degrees (both masters and doctorates) were awarded to persons of color in 1994-95 (see Table 3, "Total Graduate Degrees Received by Graduate Students of Color by Year, University of Minnesota"). **Note:** These figures are for Graduate School degrees only and do not include professional degrees (e.g., M.D., J.D., MPH, MEd).

Social and Ethnic Considerations. The mixture of students of different races and cultures enriches the intellectual and social context; however, challenges are presented as well. For example, in 1992, 11.8 percent of all doctorates awarded--3,041 out of 25,759--went to minorities; a decade earlier, minority students earned 11.1 percent of all Ph.D.s (Mercer, 1994).

For each institution challenged to improve retention and graduation of persons of color, it is important to remember that there are striking social and cultural differences between the minority populations in the United States. When looking at two minority groups--Hispanics and African Americans--for example, we see some disturbing trends. Hispanics (U.S. citizens of Mexican, Puerto Rican, Cuban, or Latin American descent) are the fastest growing minority in the country (Estrada, *et. al.*, 1981) but they are characterized by below-grade-level enrollment as well as high attrition rates (over 50 percent) in many school districts, high rates of illiteracy, low numbers of school years completed, and great underrepresentation in higher education (Arias, 1986).

As a group, Hispanics include people from numerous and very different national backgrounds. They are new immigrants from rural villages living, working and studying alongside those who have had families in the United States for generations. Hispanics are represented in all social classes. Some are monolingual Spanish speakers, while others have never learned Spanish. The dominant Hispanic groups in different parts of the country have clearly diverse cultural origins and histories--from Mexican (Mexican Americans, or Chicanos, the largest subgroup, accounting for 60.6 percent of the total) in the Southwest, where most Hispanics live, Puerto Rican (second largest subgroup, with 15.2 percent) in the Northeast,

TABLE 3

Total Graduate Degrees Received
By Graduate Students Of Color, By Year
University of Minnesota
(July 1 - June 30)

YEAR	1987 -88	'88 -89	'89 -90	'90 -91	'91 -92	'92 -93	'93 -94	'94 -95
CHIC	6	3	5	4	5	10	11	15
HISP	4	10	6	14	14	14	8	5
AFR-AM	11	20	16	29	26	28	41	27
AM-IND	4	10	7	8	6	9	8	7
AS-AM	38	42	50	36	37	62	53	51
TOTAL	63	85	84	91	88	123	121	105
PERCENT OF ALL DEGREES	2.97%	3.92%	3.59%	3.75%	3.77%	5.21%	4.96%	6.05%

(NOTE: Data Do Not Include International Students)

Source: Office Of Data Management, The Graduate School, University of Minnesota, Minneapolis, Minnesota, Based On Self-Report Data, Fall, 1995

the Cuban (accounting for 6.1 percent of the population) in Florida, with a great mixture of the three in Chicago. The remaining 18.2 percent are "other Spanish" from Spain and the Spanish-speaking countries of Central and South America (Arias, 1986:28; Orfield, 1986).

Circumstance and conditions of African Americans in the student body require no less sensitivity to detail when the potential contribution of mentoring is considered. Despite representing over 12 percent of the U.S. population, African Americans were only 9.2 percent of the college enrollment in 1980 and 8.7 percent in 1989. Further, 1,013 Black students earned doctorates in 1981 (Letherman, 1992), and only 3.8 percent of the doctoral degrees in 1989 (Nettles, 1991). In 1991, Black students earned only 933 of the 34,451 doctoral degrees awarded (2.7 percent) (Letherman, 1992). African American faculty constituted only 4.5 percent of the nation's college and university faculty (Nettles, 1991). According to Allen (1988), until 1950, more than 75 percent of Black college students enrolled in historically Black institutions. By 1973, that percentage had dropped to roughly one-quarter. As of 1982, three-fourths of all Black college students were in predominantly White institutions. But these Black students who attend predominantly White colleges and universities experience significantly greater levels of social isolation, alienation, personal dissatisfaction, and overt racism (Allen, 1988; Blackwell, 1989; Loo and Rolison, 1986).

One expectation of education, and especially higher education, is to contribute to improvement of the social and economic well-being of individuals and groups within our society. Higher education could be one of the primary paths to the attainment of positions of economic and political power for members of minority groups. However, based on current research, on the whole, minorities have *not* been beneficiaries of policies which have sought to increase the recruitment, retention, and graduation of persons of color, to improve graduation standards, improve curricular offerings, and reduce teacher/student ratios.

The implications of these realities must be acknowledged by program administrators, mentors, and proteges if higher education institutions are to address demographic changes indicated above. Several variables have been found to be important in matching mentors and proteges and, ultimately, to the success of the mentoring relationships. These variables include attention to gender, major area of interest, dominant personality traits, and sometimes race or ethnicity (Blackwell, 1989; Erkut and Mokrus, 1985; Gilbert, 1985; Knox, 1988).

Actualizing this educational vision requires understanding the forces that preclude and those that promote equal opportunity and academic success. Higher college dropout rates, lower levels of academic preparation in high school, lower socioeconomic status, and greater alienation or isolation in the White college environment have been cited as problems facing ethnic minority college students (Loo and Rolison, 1986).

There is a growing body of evidence indicating that social and academic integration tend to have a differential influence on persistence for different kinds of students (Astin, 1985; Pascarella and Terenzini, 1991; Tinto, 1987). Mentoring cannot be overlooked when examining the various contributors to student persistence. Based upon findings from research on student attrition (e.g., Tinto, 1992, 1991, 1988, 1987) social and academic integration levels of students in the higher education institution can be affected by mentoring. And, as will be shown, the present research findings indicated early on, for example, that women of color face distinct barriers to supportive mentoring relationships.

It is also important to consider cultural features of these populations. When examining ways ethnicity can impact an effective mentoring program, for example, culture plays a major role. Some culturally determined behaviors of Hispanics, for instance, such as ways of dealing with authority figures, expressing unwillingness or disagreement, the role of friendship, sources of motivation, cooperation versus competition, communication styles (verbal and nonverbal), and the relationship with

time and physical space, may be in conflict with the counterpart behaviors in the dominant culture (Melendez and Petrovich, 1988). The implications of these facts must be understood if quality mentoring is to occur in higher education.

Hispanics are less likely than Whites to exhibit the styles of communication and behavior that are likely valued in academia in the United States: openly expressing disagreement, actively participating in classroom discussions, working independently, maintaining eye contact, and speaking assertively. Hispanics, especially women, are more likely to exhibit less assertive and more "personal" styles: avoiding differences of opinion, working cooperatively, averting eye contact, and qualifying their statements (Melendez and Petrovich, 1988).

Even though social and educational programs were initiated in the 1960s, the problems of poverty, insufficient financial aid, ineffective recruitment practices, exclusionary admissions requirements, shortage of minority faculty and administrators, weak curricula, culturally illiterate campuses, and racial/ethnic discrimination, for example, still remain in many institutions. Minorities as a whole are encouraged to behave like the majority White, middle-class even though this may go against their own deeply-ingrained cultural behavioral norms. By doing this, both Whites and minorities are missing out on the benefits that diversity can bring to the campus and to the society as a whole. Majority campuses, generally, historically have been nonwelcoming to students from other linguistic and cultural backgrounds. This is also true of the University of Minnesota, the site for this present study. Minority students have expressed feelings such as the "climate" being cold and unwelcoming at the University of Minnesota (Turner, 1994). Others have stated that "retention rests on feeling connected" (Tabet, 1994).

For minority students, mentoring programs can mean the difference between isolation and integration; failure and success. In like manner, for proteges of the White majority, mentoring programs which include the goal of sensitizing participants to ethnic differences can mean maximized understanding of persons of

other cultures. It is possible for this sensitizing process to lead to life-long, valued people skills.

Mentoring programs can be an important step in raising faculty awareness of the diversity issue. Many faculty do not acknowledge the importance of understanding the effects of cultural differences on student perception and learning styles. Some question the wisdom of diversifying teaching methods and topics to incorporate the experiences of all students into the educational process (Sodano and Baler, 1983).

Given the challenges facing higher education today, students of color are the responsibility of all faculty, not just faculty of color (Carter and Wilson, 1992). Closer association between faculty and students of color could reduce stereotypes and reveal students who are intelligent, resourceful, and resilient. Therefore, sensitizing *all* faculty to the experiences of students of color is essential, and quality mentoring program design is clearly inadequate without prioritizing these considerations.

Faculty becoming involved in these programs for students of color is an important first step in promoting diversity on campus. Continued support and promotion is essential not only to the success of special programs, but to the successful social integration of the students themselves.

Gender Considerations. Gender coupled together with ethnicity variables establishes another important function category of consideration in quality mentoring program design. As Carter, Pearson, and Shavlik (1988) state:

> At the intersection of race and gender stand women of color, torn by the lines of bias that currently divide white from nonwhite in our society, and male from female. The worlds these women negotiate demand different and often wrenching allegiances. As a result, women of color face significant obstacles to their full participation in and contribution to higher education...Collectively, today's women students are diverse in terms of age, social class, race, ethnicity, and religion. Their needs and learning styles often challenge the prevailing culture.

Harriet Zuckerman (1977), the sociologist, concluded from some of her earliest research on Nobel laureates that, like Supreme Court justices and admirals and generals, American Nobel laureates were far more likely to be "the *sons* (my italics) of professionals than of businessmen" (p. 64). The book details a cloning process by male mentors (her terminology is master/apprentice, which in today's jargon is mentor/protege). In 1991, nearly 15 years later, Zuckerman now focuses deliberately on gender issues. Zuckerman (1991) writes:

> Based on what is now known, how much have women scientists' careers changed since Florence Sabin's time (*circa* 1902)? It would have been inconceivable in 1925 that women scientists would be hired as faculty members by universities at about the rate they were getting Ph.Ds. Still, their career attainments continue, on average, to be more modest than those of men in all sectors--in academia, industry, and government--and the gap in attainments grows as men and women age (pp. 55-56).

MENTORING: BACKGROUND

Mentoring is not a new concept and indicates a certain evolution. It may date back to the Neolithic Age (Stone Age--6,000 B.C.) or earlier (Gerstein, 1985). This early mentoring was not a formal process. It "just happened." Early mentoring was informal.

The term "mentor" has its roots in Greek mythology. In Homer's poem, *The Odyssey*, the royal warrior, Odysseus, entrusted the care of his son, Telemachus, to his trusted friend and counselor, Mentor, while Odysseus was fighting the Trojan War. Odysseus' friend was charged with caring for Telemachus and serving as guardian to the entire royal household. As the story unfolds, Mentor accompanies and guides Telemachus on a journey in search of Odysseus and, ultimately, for a new and fuller identity.

Anderson and Shannon (1988), referring to the account of Mentor, state that mentoring is an intentional process; a nurturing process; an insightful process; a

supportive, protective process; and that role modeling is a central quality of mentoring.

In the same view, another researcher has described mentoring as "the act of providing wise and friendly counsel" (Redmond, 1990). Redmond (1990) goes on to say that "in most cultures, wiser or more experienced persons have played significant and respected roles in guiding the personal and professional decisions of those younger and less experienced."

Daloz (1983 and 1986) uses the metaphor of a journey to illustrate the phases of mentoring. For him, proteges embark on a journey toward autonomy and a new form of a more equal relationship with the mentor.

According to Perry (cited in Daloz), the psychosocial developmental journey begins as a young child when good and evil are clear and distinct and authority unequivocally divides right from wrong. As the child travels through life's stages, however, things become less clear and less certain. Basic, dichotomous cognition is replaced with uncertainty and fear of the unknown. No longer able to resolve uncertainty by appealing to an outside authority figure, the child/young adult turns inward for inner strength and Truth (with a capital T). Truth, however, is evasive and complex. It is discovered that, despite many possible truths, not all are the same, nor do they exist in isolation.

Therefore, the child/young adult has travelled from dualism--characterized by simplicity and black-or-white thinking; through the confusion of multiplicity--where truths seem arbitrary; to contextual relativism--where meaning is constructed in community, not in isolation. The child has been transformed from a self-centered, immature being to an others-oriented, mature individual.

MENTORING: FOUNDATION IN BUSINESS

The emphasis placed upon early apprenticeship training in many professions today illustrates the significance of a mentor to the education and career development of a novice (Bova and Phillips, 1984).

David Levinson in his 1978 book entitled *Seasons of a Man's Life*, states that mentoring advances successful individual development and that mentors "support and facilitate the realization of the Dream"--"the Dream" being the vision a young person has about the kind of life he or she wants to have as an adult.

Levinson (1978) defines the mentoring experience as one of the most complex and developmentally important relationships that we have. His overall view of a mentor is a senior, experienced person who chooses a younger person as his (*sic*) protege and teaches specific skills, develops the protege's intellectual abilities, intervenes to facilitate the protege's entry and advancement; serves as a host and guide who welcomes the newcomer into his profession, shows him how to operate, and introduces him to its most important players, provides advice, encouragement and constructive criticism; and serves as an exemplar who embodies values and an approach to professional endeavor and personal life that the protege can emulate. Levinson sees the mentor as both parent and older peer, whose efforts and special concern push the protege toward realizing full potential. Further, Levinson (1978) states that mentors seem to appear as individuals enter times of impending change in their lives, stay with them through the transition, and then depart.

One of the first issues in the search for a valuable, current mentoring definition, then, results from this base. While the relationship exists, what are the benefits of quality mentoring? And in this context, "**quality mentoring**" is deliberately used to refer to the most complete set of functions possible in a deliberate, growth-facilitating relationship. As is demonstrated later, this primary issue coincides with Table 6, "Benefits and Responsibilities of the Quality Mentoring Relationship" which specifies factors demonstrating that quality mentoring

encompasses and expands beyond the roles of both advising and what can generally be termed student support systems.

Contemporary research indicates that the mentoring process in business organizations is highly valued (Burke, 1984; Clawson, 1980; Collins and Scott, 1978; Fagenson, 1989). Mentoring has been, and is presently being utilized in the business world as a career development phenomenon (Merriam, *et. al.*, 1987). This current form as implemented by commercial organizations is called "planned" mentoring and is used to increase opportunities for individuals who are less likely to be involved in "naturally occurring" mentoring relationships (Zey, 1988).

Organizations that adhere to the human resources frame (Bohlman and Deal, 1984) are prime proponents of mentoring in a business environment because in these kinds of organizations people are of central importance. Ways and means of designing a comfortable environment and integrating the individual into that environment is a high priority. The human resources frame promotes participation, produces commitment, is a basis for helping individuals grow and improve, and promotes growth and self-actualization.

All of these goals and functions also contribute to quality mentoring. Moreover, mentoring in general contributes to a business organization's morale. Caplow (1983) states that an organization has high morale when most of its members accept its goals, obey its important rules, and choose to stay with it. Mentoring can contribute to the optimization of all of these conditions as well. Gerstein (1985) states: "this [mentoring] common human practice is being recognized and accepted by major business corporations, colleges, universities, and schools, and various agencies, foundations, and associations as a formal component of overall career and human resource development."

MENTORING: HIGHER EDUCATION

In a holistic sense, quality mentoring can be seen as a way of addressing society's injustices (Redmond, 1990). Redmond (1990) contends, and many other researchers agree (Astin, 1985; Pascarella and Terenzini, 1991; Tinto, 1987, for example), that students frequently leave universities before graduation for reasons other than academic ones. For instance, the psychosocial climate of a university has a tremendous effect on students, especially those from culturally diverse backgrounds (Green, 1989; Smith, 1989; Kauffman, Carter and Hurtado, n.d.).

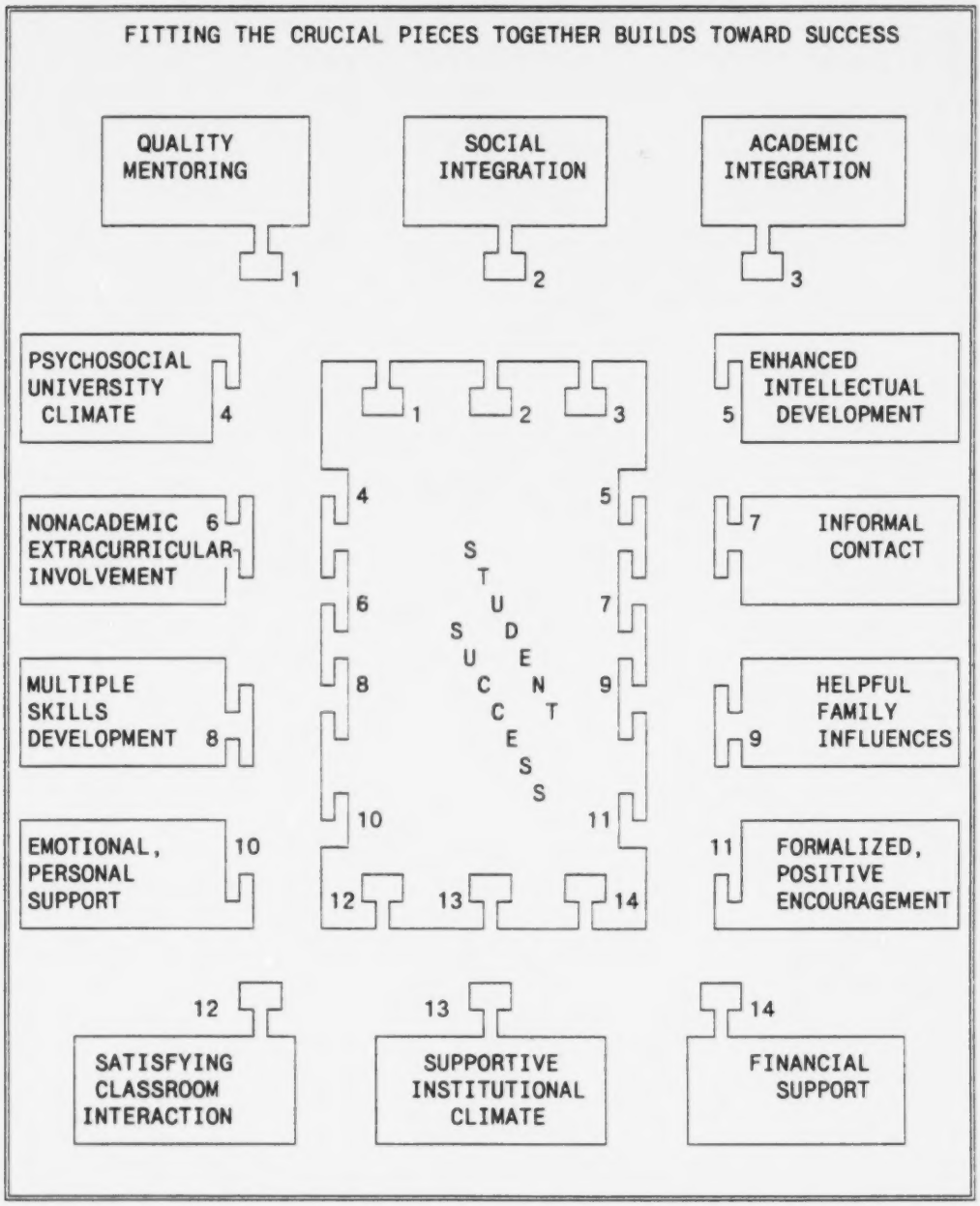
What are some of the factors that lead to student success in college? How do mentoring functions interact with other factors associated with student success? This is another in a series of issues in the search for a valuable, current mentoring definition. It must be recognized that this issue is complex. It is helpful at this point to make an important distinction. Current mentoring research does not conclude that quality mentoring is the *only* variable that affects increased retention. But the research for this dissertation indicates that quality mentoring *is* a factor that can positively contribute to retention.

As Figure 3 illustrates, my view is that effective mentoring in an academic setting involves not only the transfer of academic skills, attitudes, and behaviors but also involves coexistence of mutually interdependent factors contributing to development of a level of interaction, trust, and communication which, in turn, results in psychosocial comfort that empowers a student with the knowledge and confidence to grow. This means to experience both academic and personal development/growth. If such growth occurs, the student will be more likely to remain at the university until graduation, thus meeting the need of the university to address the problem of retention (Merriam, 1983).

The following discussion further details some of these success factors and illustrates how mentoring can enhance student success relative to each of the detailed factors.

FIGURE 3

The Mentoring Relationship And Co-existing
Factors Leading Toward Student Success



Social and Academic Integration and Attrition

Pascarella and Terenzini (1991) indicate two persistent themes in the research literature. The first is the central role of other people in a student's life (students, staff, and faculty), the character of the learning environments they create, and the strength of the stimulation their interactions provide for learning.

As Pascarella and Terenzini (1991) state:

> ...the extent and quality of one's social interactions with student peers and faculty...(have a) positive influence on persistence, educational aspirations, bachelor's degree attainment and graduate school attendance. This influence is largely independent of student precollege characteristics, the characteristics of the institution attended, and one's level of academic achievement during college. Thus, consistent with theoretical expectations, social interaction with significant others during college, and the encouragement received therefrom, exert an independent influence in the educational attainment process (page 418).

More than two decades ago, Astin (1970) proposed one of the earliest college impact models, now known as the "input-process-output" model. Since then, he and his colleagues (Astin, 1984; 1985; Jacobi, Astin, and Ayala, 1987) believe higher education's purpose is one of talent development. Out of this work, and consistent with Pace's (1984) research on the quality of student effort, Astin proposed a "theory of involvement" to explain how students develop during the college experience. As Pascarella and Terenzini (1991:50) state:

> According to Astin (1985, p. 133; 135-136), his theory can be stated simply: *students learn by becoming involved.* He sees in his theory elements of the Freudian notion of cathexis (the investment of psychological energy), as well as the learning theory concept of time-on-task. He suggests five "basic postulates": (1) involvement requires the investment of psychological and physical energy in "objects" (for example, tasks, people, activities) of one sort or another, whether specific or highly general; (2) involvement is a continuous concept--different students will invest varying amounts of energy in different objects; (3) involvement has both quantitative and qualitative features; (4) the amount of learning or development is directly proportional to the quality and quantity of involvement; and (5) educational effectiveness of any policy or practice is related to its capacity to induce student involvement.

The second theme is the potency of students' involvement in the nonacademic systems of the institutions they attend. Thus, the major implication of their comprehensive review for individual campuses and their faculty and administrators was to suggest the shaping of the interpersonal experiences and settings of the campuses in ways that will promote learning and induce students to become involved in these activities.

There is also a growing body of evidence indicating that measures of social and academic integration tend to have a differential influence on persistence for different kinds of students. Mentoring is an attractive approach to meeting the needs of certain groups of students who are most at risk of leaving the university before graduation.

Informal Contact

There can be little doubt about the need for faculty members' acceptance of their roles and responsibilities for student learning and for their active involvement in students' lives (Baird, 1988). Research makes clear the important influences faculty members have on students. Pascarella and Terenzini (1979), for example, found that the frequency of informal contact with faculty to discuss intellectual issues and the perceived quality of interaction with faculty and peers had their most positive influence on persistence for students who came from families where parents had relatively low levels of formal education.

Similarly, evidence from analyses of two independent national samples reported by Astin and Panos (1969); Kocher and Pascarella (1988); Pascarella, Smart, and Ethington (1986); and Stoecker, Pascarella, and Wolfle (1988) suggests that degree of student–faculty social contact has a significant association with bachelor's degree completion and educational attainment through the doctoral degree (Pascarella and Terenzini, 1991). Social contact, therefore, is influential at both the undergraduate and graduate levels.

A central and recurring theme throughout Pascarella and Terenzini's (1991) study of 20 years' of college student experiences is that "it is clear that many of the most important effects of college occur through students' interpersonal experiences with faculty members and other students" (page 644).

Supportive Institutional Climate

To Astin (1975), student persistence depends to some extent on the degree of personal involvement in campus life and environment. He determined as well that student faculty contact had a significant impact on retention. It would appear, then, that in order to improve retention, it is crucial to improve the quality of interaction between students, faculty, and staff and to demonstrate concern and care for students. The functions of demonstrating concern and care for students are important mentoring functions and are among the central issues in this dissertation.

Miller and Brickman (1982) report on a program designed to help students and faculty. The Faculty and Staff Mentoring Program at Canisius College was established to enhance freshmen interaction with faculty and administrators. The objectives of the program were (page 24):

1. To arrange for senior faculty and staff of the college community to have a positive impact on new students so that their assimilation into the academic community was aided.
2. To provide a support group of peers for new students so issues of mutual concern could be addressed in a peer group setting.
3. To enhance the personalization of the academic environment for new students.
4. To enhance relationships between new students and faculty members and administrators.
5. To provide a continuing orientation to college life and to increase the involvement of new students in the academic community.
6. To aid new students in developing the skills necessary for them to cope with their challenges and to improve their chances for academic success.
7. To help students identify positively with the college by conveying concern for and care to them.

Miller and Brickman (1982) state that the program was perceived as being particularly effective in providing "an orientation to the surroundings," the opportunity for students "to develop a close relationship with a concerned faculty or staff member," and "the chance to learn how the college operates." In support of the importance of reciprocity through mentoring advocated in this dissertation, it is important to note that they report that the students were not the only ones to benefit from the experience. For example, through the contact and interchange with a small group of young people, *the faculty mentors reported it to be a revitalizing and energizing experience* (italics mine).

An institution's cultural environment was found to be very important. Richardson, Simmons and de los Santos (1987:23) state:

> Where minority student enrollment is closer to 10 percent, considerable attention is given to building an environment minority students perceive as hospitable....As enrollments of a specific minority group approach 20 percent, the environment changes from accommodation through special programs to incorporation into the mainstream of institutional culture.

One institution in the Richardson, *et al.* (1987) study emphasized the recruitment of graduate students as a strategy for getting minorities up in front of lower division classes and serving as role models for high school students considering a baccalaureate program. In addition to working toward expanding the pool of potential minority faculty members and emphasizing affirmative action in faculty recruitment, these institutions provided summer bridge programs, had orientation programs, and offered tutoring. Special support programs for minority students are constantly being evaluated and brought into the mainstream operations of these and many other institutions. Their conclusion is clear:

> ...there seems to be a substantial correlation between the extent to which these characteristics exist and the degree of success an institution experiences. The best graduation rates occur where comprehensive and systematic institutional efforts are supplemented by strong support from system and state leadership. Good results

> also occur when one variable, such as committed institutional leadership, partially offsets the absence of another (page 26).

In this context, it is helpful and important to emphasize again that mentoring as a tool for retention can ultimately lead to more minority faculty members. As Blackwell (1989:8) states:

> Mentoring is a process that can increase the retention of minority students in colleges and universities, a process through which larger numbers may be graduated from colleges, enter and complete graduate training, be hired for faculty positions, and be retained as contributing members of the professorate.

The work in this dissertation investigates the importance of mentoring in recruitment and retention. Focused on women students of color, this research examines factions from both psychosocial and sociological perspectives. The importance of these factors is highlighted by Pascarella and Terenzini (1991) when they state:

> ...the extent and quality of one's social interaction with student peers and faculty...(have a) positive influence on persistence, educational aspirations, bachelor's degree attainment and graduate school attendance. This influence is largely independent of student precollege characteristics, the characteristics of the institution attended, and one's level of academic achievement during college. Thus, consistent with theoretical expectations, social interaction with significant others during college, and the encouragement received therefrom, exert an independent influence in the educational attainment process (page 418).

Planned mentoring increases opportunities for advancement for racial and ethnic groups by targeting students who have experienced societal racism, lack of access to social resources, and inadequate educational preparation during their lifetime. As Redmond (1990) explains,

> Planned mentoring systematically addresses causes of culturally diverse student attrition and delayed graduation by (a) promoting greater student/faculty contact, communication and understanding; (b) encouraging the use of university resources designed to aid students with nonacademic problems; (c) intervening promptly with academic difficulties; and (d) creating a culturally validating

> psychosocial atmosphere....All will benefit if the mentoring relationships are successful.

Blackwell's (1989) study of African American graduate student mentoring experiences revealed that:

> only one in eight persons has ever had a true mentor, as distinguished from sponsors for specific purposes, advisers, and guides. Given the multitude of constraints imposed upon most professors, the majority of students--graduate or undergraduate--manage to traverse the academic maze without ever having a true mentoring experience (page 10).

Blackwell states further that:

> those who teach are often guilty of subconscious (though sometimes conscious and deliberate) efforts to reproduce themselves through students they come to respect, admire, and hope to mentor. As a result, mentors tend to select as proteges persons who are of the same gender and who share with themselves a number of social and cultural attributes or background characteristics such as race, ethnicity, religion, and social class. Because minorities are presently underrepresented in faculty positions, such practices inevitably result in the under-selection of minorities as proteges (page 11).

In academia, faculty are very important to the success of a mentoring relationship, whether it be an informal association or a formal mentoring program. Pascarella and Terenzini (1991) provide an argument for mentoring by stating:

> It is clear that many of the most important effects of college occur through students' interpersonal experiences with faculty members...On some (perhaps many) campuses, minority students feel a powerful need to band together for psychological and social support of one another, sometimes in defense against the tacit and not-so-tacit condescension and hostility some feel from white faculty, students, and staff alike...It does not seem unreasonable to suggest that under such conditions the educational experiences and outcomes of college for nonwhite students are probably very different from those for white students, perhaps significantly so. Certainly, more research is needed to clarify the nature of the college experience and its effects on psychosocial change among nonwhite students (page 644).

In graduate education, personal relationships with faculty members and being treated as a junior colleague by a faculty member who acts as a mentor are

significant predictors of completing the doctorate (Berg and Ferber, 1983). Turner and Thompson (1992) found that the opportunity for apprenticeship/mentorship experiences appears to be a critical ingredient of success in graduate school and in a subsequent academic career. Minority women in their study report fewer of these experiences than majority females. Thus, Turner and Thompson (1992:20) suggest that "minority women have less opportunity for successful academic careers."

Baird and colleagues (Baird 1976a and b; Baird, Clark, and Hartnett, 1973) surveyed a national sample of graduate students on the importance of a range of factors concerning their senior-year decisions to attend graduate or professional school. Sixty-five percent of the graduate students in arts and humanities, 62 percent in the biological or physical sciences, and 56 percent in the social sciences said that the personal encouragement of faculty (mentoring) was an "important" or a "very important" factor in the decision to further their education.

Mentoring programs should be designed to ensure as much interaction as possible with departments or programs that most affect the academic and social lives of culturally diverse students. Advertising and recruitment should emphasize the *reciprocal* benefits of participation to enhance the image of the mentoring relationship as a partnership rather than a "missionary" one.

TOWARD A COMPREHENSIVE DEFINITION OF MENTORING

What factors distinguish mentoring in academia from advising and/or other relationships between faculty and student peers? To answer this question, a beginning must be made to establish certain definitions. Necessary parameters must be identified to set up a solid foundation so that a sound argument may be made for the real existence of mentoring as opposed to, for example, "intense advising," or "counseling in higher education."

Advising in academia is an intentional, planned process which entails giving advice, making recommendations, stimulating acquisition of knowledge, providing information (often technical) about educational programs, creating understanding of procedures and educational bureaucracy, providing counsel that is specific to time and requirements, and advising may involve strengthening a student's or junior faculty member's motivation to perform at potential, or may include disciplinary measures.

Advising roles in the academy deal mainly with academic progress activities, are time-constrained, and do not emphasize personal and/or emotional matters as a primary function. In this kind of relationship, students or junior faculty most commonly receive *advice* from advisors, not *mentoring*.

Student-to-student advising functions are similar with respect to levels of depth. Students within a support system (e.g., extracurricular group) give and receive valuable advice (which courses to take and when, which instructors are "better," which faculty are the most helpful advisors, intricacies of the bureaucracy as learned from experience). This kind of support system has the added feature of giving and taking advice of a distinctly personal nature. Befriending, providing emotional support and encouragement, developing trust, and providing an environment to discuss financial problems are good examples of student-to-student advising. This highly personal or "friendship" characteristic, though it may be focused on the moment rather than on purposeful counseling, generally is not typical in a faculty/student advising relationship, especially on large U.S. university campuses.

The Mentoring Relationship and Inherent Functions

It is helpful to examine the literature itemizations of typical functions grouped as common benefits of various forms of relationships. Table 4, "Distinguishing Functions/Characteristics of Advising, Mentoring, and Support

TABLE 4

Distinguishing Functions/Characteristics
Of Advising, Mentoring, And Support Systems

Definition/Functions	Relationship		
	Faculty Advising	Traditional Mentoring	Student Support Systems
Intentional/planned process	X	X	X
Give Advice	X	X	X
Make recommendations	X	X	X
Provide counsel	X	X	X
Promote personal development	X	X	X
Stimulate acquisition of knowledge	X	X	X
Provide information about educational programs	X	X	X
Create understanding of educational bureaucracy	X	X	X
Act as role model	X	X	
Strengthen motivation to perform at potential	X	X	
Provide emotional support and encouragement		X	X
Help build self-confidence, heighten self-esteem		X	
Teach		X	
Sponsor		X	
Befriend		X	X
Provide training		X	
Socialization into profession/career		X	
Socialization into institutional culture		X	
Inculcate values, ethics		X	
Defend and protect		X	
Provide nurturing environment		X	
Develop trust		X	X
Is multi-faceted		X	
Is long-term		X	
Requires time commitment		X	
Partnership		X	
Promotes mutual respect		X	
Development of whole Person		X	

Systems," develops a composite of this author's analysis of the mentoring definitions gleaned from the mentoring literature review. This table also summarizes distinctions in the definitions/functions of advisor, "traditional" mentor, and other support systems. The first eight definitions/functions are part of all three relationship categories. From that point on, as the relationship moves toward functions of greater complexity and comprehensiveness, advising responsibilities end (e.g., financial aid counseling, student orientation, coursework counseling, forms and procedures compliance) and student support systems are less often represented. It is important to note that according to this table (and, hence, this author's interpretation), traditional mentoring includes functions of faculty advising, student support systems, as well as the more complex functions below the line. Therefore, there is not a single function listed in this table that is not included in traditional mentoring.

This researcher proposes that a mentor-protege relationship evolves from traditional mentoring to quality mentoring as the breadth of the relationship deepens. As can be seen in Table 4, an advisor's responsibilities tend to be rather shallow, whereas the responsibilities of a (quality) mentor is considerably more complex. Further, Figure 4 assists in understanding that advising can be characterized by lesser levels of functions, whereas quality mentoring addresses more complex levels of functions. In order for the relationship to evolve from an advisor-student relationship to the functionally more comprehensive relationship of quality mentoring, commitment of substantial increases in both time and effort from both parties is necessary.

The quality mentoring process can be very labor intensive and requires continuous attention to the relationship by *both* mentor and protege. Purposeful human interactions, such as advising, counseling, and supporting, are important *initial* start-up elements in the mentoring process from the mentor's perspective. And, emulating, sharing, and affirming are equally valued protege behaviors as

FIGURE 4

Primary Functions of Advisor and Mentor

ADVISOR:	PRIMARILY CONCERNED WITH ONE'S SUCCESS AS A STUDENT
MENTOR:	GUIDES, PROTECTS, AND EMPOWERS A PROTEGE; THE MENTOR IS CONCERNED WITH THE SUCCESS OF THE WHOLE PERSON

counterparts that fulfill the quality mentoring process. Quality mentoring relationships include social components that expand and deepen the relationship beyond its initial stages.

Anderson and Shannon (1988) state that mentoring is an intentional process; a nurturing process; an insightful process; a supportive, protective process; and that role modeling is a central function of mentoring. They define mentoring as:

> a nurturing process in which a more skilled or more experienced person, serving as a role model, teaches, sponsors, encourages, counsels, and befriends a less skilled or less experienced person for the purpose of promoting the latter's professional and/or personal development. Mentoring functions are carried out within the context of an ongoing, caring relationship between the mentor and protege (page 40).

Healy and Welchert (1990) believe that mentoring goes beyond personal development. An especially noteworthy part of their definition, and one which is used by this dissertation researcher as the stimulus of the new mentoring definition as well as the developed conceptual framework, is that the **quality mentoring** relationship is *reciprocal*. That is, mentoring is aimed at promoting career and professional development of **both** the mentor and the protege. For example, Healy and Welchert (1990, page 17) state:

> For the protege, the object of mentoring is the achievement of an identity transformation, a movement from the status of understudy to that of self-directing colleague. For the mentor, the relationship is a vehicle for achieving midlife "generativity" (Erikson, 1963), meaning a transcendence of stagnating self-preoccupation via exercise "of an instinctual drive to create and care for new life" (Erikson, 1963).

The research findings presented in this dissertation substantiate the necessity of the crucial element of reciprocity in a quality mentoring relationship. For example, the dissertation fieldwork indicated that the mentoring relationships that were described as having clearly mutually beneficial outcomes were evaluated as the most successful and rewarding by both the protege and the mentor.

Quality mentoring functions, then, as identified in the literature, build the mentor and protege benefits/responsibilities systems. For example, Clawson (1980) has compiled a profile of the mentor-protege relationship (MPR) (see Table 5), which describes benefits and responsibilities for both mentor and protege.

Sandler and Hall (1983) specifically focus on the faculty-to-faculty mentoring format. In this version of the mentoring relationship, the more experienced senior faculty member takes a less experienced junior faculty member "under his/her wing," helps the person set goals and standards and develop skills, protects the protege from others (which allows room for risk and failure), and virtually helps the junior faculty member to be initiated/accepted into the academic culture of the institution as well as professional circles to become a contributing member of that culture. Expanding this mentoring relationship to include quality mentoring between faculty and student, this present researcher has developed Table 6, "Benefits and Responsibilities of The Quality Mentoring Relationship". Note the reciprocal nature of the quality mentoring relationship.

It should be understood that not all researchers see equal benefits from fulfillment of responsibilities of formalized as opposed to informal mentoring. Klopf and Harrison (1981) state that mentoring relationships cannot be legislated (formalized) because the "personal fit" is too important and should be left to mutual (informal) self-selection. On the other hand, other researchers (e.g., Zey, 1988) have found that a planned (formalized) mentoring program is important and is used to increase opportunities for individuals who are less likely to be involved in a more "naturally occurring" mentoring relationship. This is especially true for women striving to become executives in the business environment as well as women faculty members striving to advance in their academic careers. Quality mentoring, therefore, may be inseparable in certain conditions from both deliberate purpose and facilitation features of the much broader environment. My point is, the literature does not emphasize the setting or policies bearing on quality mentoring--

TABLE 5
An Eclectic Profile Of Mentor-Protege Relationships

1. Mentor-protege relationships (MPRs) grow out of personal willingness to enter the relationships and not necessarily out of formal assignments. Thus, MPRs may not coincide with formal hierarchies.

2. MPRs pass through a series of developmental stages characterized as formation, duration, and fruition. Each stage has a characteristic set of activities and tasks.

3. Mentors are generative; that is, interested in passing on their wisdom and experience to others.

4. Mentors try to understand, shape, and encourage the dreams of their proteges. Mentors often give their blessings on the dreams and goals of their proteges.

5. Mentors guide their proteges both technically and professionally that is, they teach things about the technical content of a career and things about the social organization and patterns of advancement of a career.

6. Mentors plan their proteges' learning experiences so that they will be stretching but not overwhelming and successful. Proteges are encouraged to accept responsibility, but are not permitted to make large mistakes.

7. Mentors provide opportunities for their proteges to observe and participate in their work by inviting their proteges to work with them, and many times teaching them the politics of "getting ahead".

8. Proteges learn in MPRs primarily by identification, trial and error, and observation.

9. Both mentors and proteges have high levels of respect for each other.

10. Mentors sponsor their proteges organizationally and professionally.

11. MPRs have levels of affection similar to parent-child relationships.

12. MPRs end in a variety of ways, often either with continuing amiability or with anger and bitterness.

Source: Clawson (1980, p. 150)

TABLE 6

Benefits And Responsibilities Of
The Quality Mentoring Relationship

Responsibilities of the Mentor/Benefits for the Protege

Proteges can gain a host of benefits from a lasting relationship with a single mentor--and also from more limited relationships that address needs for particular skills or information.

A mentor provides for the protege:

- individual recognition and encouragement
- honest criticism and informal feedback
- advice on how to balance teaching, research, and other responsibilities and set professional priorities
- knowledge of the informal rules for advancement (as well as political and substantive pitfalls to be avoided)
- information on how to "behave" in a variety of professional settings
- skills for showcasing one's own work
- an understanding of how to build a circle of friends and contacts both within and outside one's institution
- a perspective on long-term career planning
- involvement in joint projects
- sponsorship by introducing the protege to top authorities in the field; talking up the protege's research to senior colleagues; nominating for awards or prizes

Responsibilities of the Protege/Benefits for the Mentor

While it may sound like the protege is reaping all the benefits, this is not so. The mentor gains many benefits as well.

A protege provides for the mentor:

- the satisfaction of helping in the development of another person who may carry on his or her own work
- ideas for and feedback about his or her own projects from a junior person who is eager to learn and is committed to the project's success
- a network of former proteges at other institutions who can collaborate on projects and help place students--thus increasing the mentor's power and visibility
- becoming part of an expanded network of colleagues, especially if the mentor takes part in a formal mentoring program. (This can be particularly important for women faculty, who are often isolated from senior women in other departments of their own campus).

Source: In part from Sandler and Hall (1983)

it is the "process" of mentoring in a quality relationship that receives priority attention in the literature.

While Zey (1988) indicates that mentoring may be expressed within *any or all* of a number of mentoring functions (i.e., teaching, counseling, supporting, protecting, promoting, and sponsoring), Klopf and Harrison (1981) emphasize that all processes or functions of mentoring (i.e., teaching, advising, counseling, sponsoring, and modeling) *must* be present or the roles being enacted are not mentoring. They state further that *each* party gains insight, knowledge, and satisfaction from the quality mentoring relationship. Thus, this dissertation researcher'squality mentoring definition is strengthened. These other researchers reinforce the belief that both the mentor and the protege have roles and responsibilities and both benefit from that relationship.

Further, fulfillment of responsibilities of formalized mentoring can result in meaningful benefits as seen in the California Mentor Teaching Program (Ruskus, 1988, cited in Healy and Welchert, 1990). Mentor participants in this program found that they benefitted from the experience (beyond the stipend they were paid). For instance, some of the benefits mentors experienced included: collegiality, a positive sense of efficacy, the opportunity to have a broader impact than they would have as regular teachers, the exercise of leadership, facilitation of personal creativity, having an impact on adults, professionally enriching, and having more control over their own destinies (Healy and Welchert,1990). Therefore, mentors in this formalized program not only gave assistance to proteges, but received benefits contributing to their own personal development and growth as well. The Quality Mentoring Model developed in this dissertation pays close attention to Healy and Welchert's research.

Two other research studies (Bova and Phillips, 1982; Kram, 1983) describe the mentoring relationship especially well with respect to developmental stages or phases. Bova and Phillips (1982) describe six stages: entry; mutual building of trust; risk taking; teaching of skills; professional standards; and dissolution.

Kram (1983) makes use of similar differentiations but her explanation is more detailed. She documents the concept that quality mentoring requires a serious period of time and significant effort to develop and no less time and effort to restructure. She divided her phases into four parts: initiation (a period of six months to a year during which time the relationship gets started and begins to have importance for both parties); cultivation (a period of two to five years during which time the range of psychosocial and personal growth expand to a maximum); separation (a period of six months to two years after a significant change in the structural role relationship and/or in the emotional experience of the relationship); and redefinition (an indefinite period after the separation phase during which time the relationship is ended or takes on significantly different characteristics, making it a more peerlike friendship). Clawson (1980) also states that mentor-protege relationships end in a variety of ways (see #12 in Table 5).

It is important to note that whether the mentoring relationship is formal or informal, the prerogatives of both mentor and protege include at least: the right to initiate the relationship, the right to choose whether or not to participate in the mentoring relationship, the right to confidentiality, the right to change the relationship, and the right to terminate the relationship. The point is: even if the most complex bureaucracy formalizes mentoring programs, the individual retains the rights specified.

Quality Mentoring Definition

My research study describes quality mentoring as a comprehensive, complex, interpersonal matrix of functions. The literature review supports that description. As will be shown, one of the most crucial issues relative to a comprehensive definition of quality mentoring is how extensively the functions of the mentoring process are fulfilled over time. Again, quality mentoring actually is one of the most functionally comprehensive forms of human interpersonal relationship known,

especially in terms of the breadth of the subject matter it addresses. The key tenet of this research focuses on the effect that *limiting* the mentoring functions has on the relationship's tendency to assist recruitment and retention of women students of color.

Quality mentoring can occur in a voluntary, informal relationship as well as in a formalized mentoring program. Because of similar mentor-protege functional characteristicsexisting in both formal and informal quality mentoring relationships, the focus here is not on the distinction between these two "structures" for mentoring, but instead, quality mentoring relationship activities and results are the central issues examined as a whole, continuing, and evolving process. The focus here is on the process. In other words, quality mentoring addresses the same functions, rights, and responsibilities, whether within a formal or informal relationship, and presence or absence of a sophisticated faculty remuneration policy system, existence or nonexistence of mentor-protege "interpersonal contracts," and/or published, organized printed institutional material about a mentoring program are not inherently essential ingredients to the quality mentoring interpersonal process itself.

For purposes of this research, my definition of Quality Mentoring is:

> The Quality Mentoring relationship is a dynamic, reciprocal process, formal or informal, based in mutual respect in which a more skilled or experienced person (mentor) serves as an enabling role model for a less skilled or less experienced person (protege). At the same time, the protege can provide the mentor with a fresh viewpoint and new ideas. The key point of *quality mentoring* is reciprocity--mentoring is a two-way, growth-facilitating relationship with both mentor and protege having responsibilities for the relationship and reaping benefits from the relationship.

Quality mentoring takes into account what I consider to be the most realistic of the mentoring definitions established to date, but, more importantly, it recognizes a critical component of effectiveness which has neither been emphasized nor thoroughly considered in any of the mentoring research examined; namely, the

reciprocal aspect of the mentoring relationship. Quality mentoring is definitely a "two-way street." Figure 5 on the next page gives a summary of the Quality Mentoring characteristics.

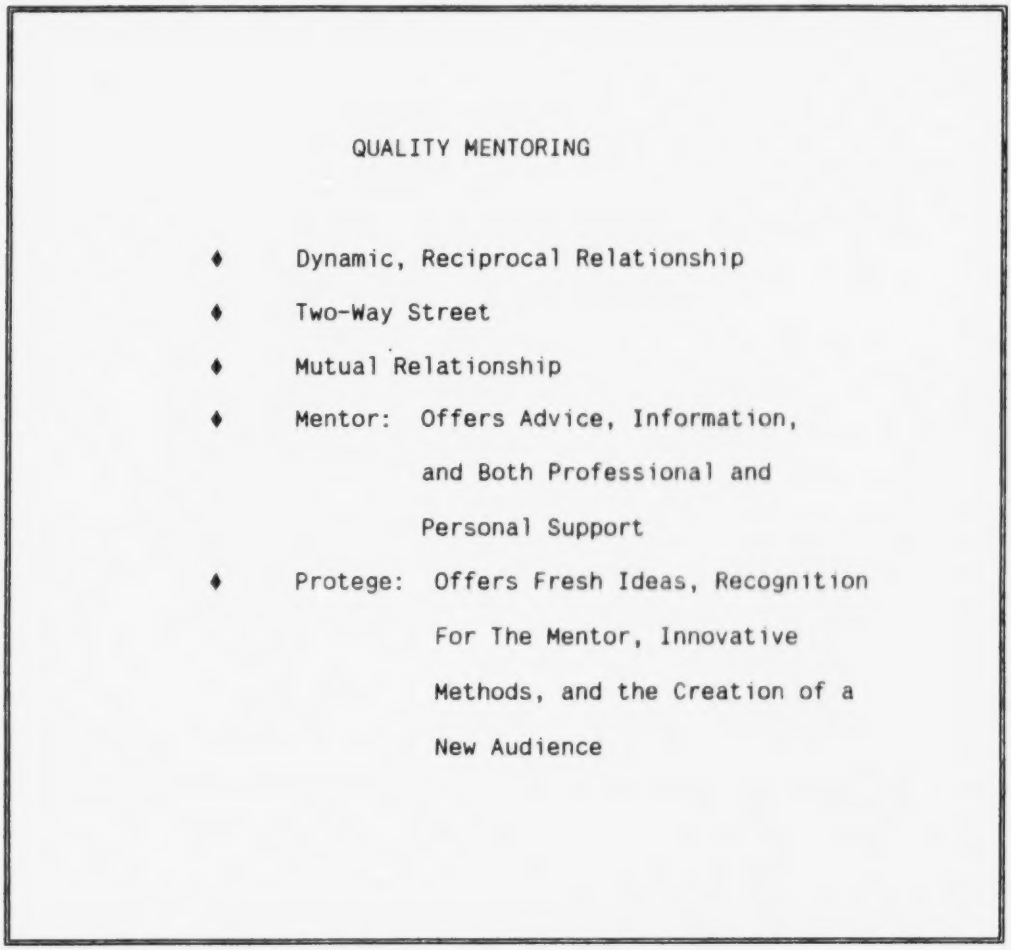
IN SEARCH OF A CONCEPTUAL FRAMEWORK

With respect to definitions alone, the current review of literature indicates that there exists a vast array of differing conceptions of what constitutes a true mentoring process. Of equal significance, the mentoring literature currently confronts the researcher with the lack of a unified, coherent conceptual framework for theoretically organizing mentor/protege functions and behaviors around a solid, reasoned structure. The review of literature suggests these two statements apply irregardless of whether the mentoring occurs within business or academic environments. The challenge in the literature is found in identifying which pieces or threads of varying mentoring relationship processes (functions) mark the interpersonal process as mentoring, as opposed to something else. In other words, the time has arrived to confront the broad issue: When does mentoring occur and when does it not?

A conceptual framework builds, revises, and/or changes existing theory. It can be likened to the frame of a house. As with a house framework, the conceptual framework supports the reality elements of the structure/thesis. The thesis can be graphically encapsulated in the conceptual framework so the key points of the study support that reality, in a manner similar to strong beams for a house. The majority of present day mentoring literature puts the sole responsibility of the mentoring relationship on the mentor. This present research at the University of Minnesota initially requires provision of a general theoretical structure that clearly faces the reality that both mentors and proteges are reactive as well as proactive and as such, both have responsibilities if quality mentoring is to take place.

FIGURE 5

Quality Mentoring Characteristics


QUALITY MENTORING
♦ Dynamic, Reciprocal Relationship
♦ Two-Way Street
♦ Mutual Relationship
♦ Mentor: Offers Advice, Information, and Both Professional and Personal Support
♦ Protege: Offers Fresh Ideas, Recognition For The Mentor, Innovative Methods, and the Creation of a New Audience

Further, making the essential transition from the general to the specific, it becomes crucial to provide a new conceptual framework that accurately describes consistent trends in mentoring realities encountered during the present research at the University of Minnesota. In other words, a focused conceptual framework is required that is directly pertinent to these particular study participants, in this specific place, in these specific micro-environments, during the specific time period of this dissertation investigation.

Miles and Huberman (1984) recommend a theoretical framework that helps form and delimit data gathering within the format of a graphic model. Of particular value in the development of the Quality Mentoring Model (QMM) were the sociological theory of Vincent Tinto and psychosocial theory of Erik Erikson. This dissertation explores both sociological theory and psychosocial theory regarding college student experiences because, "the two generic approaches to the study of change among college students has much to offer the other. Focusing on one to the exclusion of the other is not only likely to result in misspecification of the college student change process but also to be dysfunctional, leading to poor theory, poor research, and poor practice" (Pascarella and Terenzini, 1991).

Relevant general points that contribute to the building of this present mentoring conceptual framework are discussed below. Following that, pertinent sociological theory of Tinto and Erikson's psychosocial theory will be discussed as well as the Anderson and Shannon (1988) conceptual model. This supportive foundation leads to a discussion of the new **Quality Mentoring Model (QMM)**.

Mentoring Conceptual Framework Background

Following extensive investigation, it has been very helpful to recognize that Anderson and Shannon (1988) provide perhaps the clearest, most pointed description of the acute need for a mentoring conceptual framework. Namely,

> ...we are concerned by the lack of conceptual frameworks for organizing the various mentoring functions and behaviors found within the definitions of mentoring...most definitions do not provide what we believe to be the essence of mentoring (page 40).

The present conceptual framework, the **Quality Mentoring Model (QMM)**, recognizes the significance of the requirements of Anderson and Shannon (1988) as follows:

> Mentoring programs must be grounded on a clear and strong conceptual foundation. Such a foundation includes a carefully articulated approach to mentoring which would include delineation of: a definition of the mentoring relationship, the essential functions of the mentor role, the activities through which selected mentoring functions will be expressed, and the dispositions that mentors must exhibit if they are to carry out requisite mentoring functions and activities (page 38).

To further clarify the definition of mentoring and the mentoring conceptual framework, this study investigates, contrasts, and compares three programs that are designed specifically for the recruitment and retention of students of color in a variety of college/university programs. The mentoring process (or lack of it) is especially investigated.

The need for focus demands decisions to select the specific foundation for the **Quality Mentoring Model (QMM)**. Indeed, it is the pertinent comprehensive work of researchers cited in Pascarella and Terenzini that has led to placing emphasis on attrition theory of Vincent Tinto, and then, to go on to examine theory of Erik Erikson expressed via the Anderson–Shannon Model forming the foundation for the present conceptual framework.

Sociological Theory Contributing to Mentoring

This section considers certain selected sociological aspects of the college student experience. It is especially important to note that one of the most directly relevant roles an institution plays for students is comprised of exposing them to diversity, presenting opportunities to explore, peer and adult models to emulate (in

the context of this dissertation--mentoring), and experiences that challenge currently held values, attitudes, and beliefs.

Research studies investigated in this dissertation suggest that there are priorities of focus or higher ranking concerns to look at in the successful matriculation process. Pascarella and Terenzini (1991), in their comprehensive review of recent research make decisions about what has been especially helpful to describe that process. With sociological "impact" models (as in psychosocial models), students are seen as active participants in their own growth but, according to Pascarella and Terenzini (1991),

> the environment is also seen as an active force that not only affords opportunities for change-inducing encounters but can also on occasion require a student to respond. Thus, change is influenced not only by whether and how the student responds but also by the nature and intensity of the environmental stimulus. Specification of potential areas of variation in institutional environments (both within and across institutions) is a much more salient characteristic of sociological models than of developmental models (page 57).

Pascarella and Terenzini (1991) further state that:

> the more one's social experience reflects and reinforces one's academic experience, the greater will be the possibilities for intellectual development. Put another way, the more complete the integration between a student's academic life and social life during college, the greater the likelihood of his or her general cognitive and intellectual growth (page 159).

An important finding from Pascarella and Terenzini's (1991) massive review of research is that faculty play a critical role in the growth of college students. Specifically, "students who reported the greatest cognitive development were also most likely to (1) perceive faculty as being concerned with teaching and student development, (2) report developing a close, influential relationship with at least one faculty member, and (3) find their interactions with peers to have had an important influence on their development" (page 150).

It should be noted that the *quality* of these interactions is seen as an extraordinarily important factor, as it is in this present research. As a matter of fact, one of the main tenets of Pascarella and Terenzini's (1991) research is that, "the dominant source of within-college effects consistently appears to be the frequency and nature of the contacts undergraduates have with the major agents of socialization: their peers and faculty members" (page 264). It is evident, then, that Pascarella and Terenzini's (1991) review of research findings supports the focus of this dissertation which emphasizes the importance of the quality of mentoring relationship process, especially in the case of women students of color.

In an earlier article by Pascarella and Terenzini (1979), they study the interaction effects of Spady's and Tinto's conceptual models of college dropout. The quality and frequency of the student-faculty interaction is cited as the most consistent pattern of interaction effects positively influencing persistence of entering "high risk" freshmen. Frequency of informal student-faculty contact (e.g., informal mentoring; socialization) is seen as crucial. They state that "such aspects of student-faculty relationships as the frequency of student-faculty informal contact beyond the classroom are in fact positively associated with college persistence." They state further in this 1979 article that the relationships with faculty "is seen as a particularly important influence on both academic and social integration," so much so that "the benefits of certain college experiences may be sufficient to override entering traits which often typify the dropout-prone student" (page 198).

This 1979 article stressed the compensatory side of the interactions between measures of student-faculty relationships and other student characteristics (e.g., gender, racial/ethnic origin, academic aptitude, etc.). They found that

> ...in terms of main effects influence on persistence, what happens during the freshman year may be more important than the particular commitments, background characteristics, aspirations or aptitudes which the student brings to college, a finding generally consistent with earlier research on voluntary withdrawals....Thus, there may be

> important determinants of freshman year persistence which are not merely the result of the kinds of students enrolled, but rather are subject to the influence of institutional policies and programs which affect the student after he or she arrives on campus. *This may be particularly true if such programs and policies can positively influence the quality of relationships with faculty for men, and both faculty relationships and peer relationships in the case of women* (page 208, italics mine).

Further,

> The nature of these interaction effects suggests that such measures of student-faculty relationships as frequency of informal contacts to discuss career concerns or perceptions of degree of faculty concern for teaching and students function in a compensatory manner in terms of their influence on freshman persistence. That is, they provide interpersonal links with important adults in the institution which tend to compensate for the influence of an initially low commitment to the goal of graduation or the relative absence of parental role models who themselves have substantial levels of formal postsecondary education.
>
> Similarly, high levels of academic integration such as frequent informal contacts with faculty focusing on intellectual matters or perceptions of faculty as particularly concerned about teaching and students appeared to compensate for low levels of social and academic integration in other areas....This latter finding, in particular provides reasonably clear support for Tinto's hypothesis of a potentially compensatory association between social and academic integration (page 209).

In a study conducted by Pascarella and Terenzini (1983) that tested the validity of Tinto's (1975) explanatory, theoretical model of student persistence/withdrawal behavior on freshmen, they found that for women, social integration had a somewhat stronger direct effect on voluntary freshman year persistence/withdrawal decisions than academic integration. The reverse was found to be the case for males.

There is a growing body of evidence indicating that measures of social and academic integration tend to have a differential influence on persistence for different kinds of students. From the perspective of this brief overview of sociological determinants of persistence (such as mentoring), we turn to pertinent specifics of Tinto's sociological theory of persistence.

Vincent Tinto is one of the best known and respected researchersof attrition and his Theoretical Model of Dropout Behavior has been widely considered and tested since it was introduced in 1975. His theory of persistence at the undergraduate level focuses on the reasons behind the actual dropping out or persistence of a student.

Building upon the work of Spady (1970), Tinto theorizes that

> students enter a college or university with varying patterns of personal, family, and academic characteristics and skills, including initial dispositions and intentions with respect to college attendance and personal goals. These intentions and commitments are subsequently modified and reformulated on a continuing basis through a longitudinal series of interactions between the individual and the structures and members of the academic and social systems of the institution. Satisfying and rewarding encounters with the formal and informal academic and social systems of the institution are presumed to lead to greater integration in those systems and thus to student retention (cited in Pascarella and Terenzini, 1991, p. 51).

Attrition theory provided by Tinto (1987) describes essential sociological foundations:

> ...colleges are in a very real sense systematic enterprises comprised of a variety of linking interactive parts, formal and informal, academic and social. Events in one segment of the college necessarily and unavoidably feedback and impact upon events in other parts of the institution. This applies both within systems between their formal and informal components and between systems in a variety of ways. The model (of institutional departure) argues that to fully comprehend the longitudinal process of departure, one must take note of the full range of individual experiences which occur in the formal and informal domains of both the social and academic systems of the institution.
>
> Experiences, for example, in the informal academic system may feedback upon one's experiences in the formal domain of that system. This may happen in two ways. *Rewarding interactions between faculty, staff, and students outside the classrooms and offices of the institution may lead directly to enhanced intellectual development and therefore to greater intellectual integration in the academic system of the college.* They may also result in greater exposure of students to the multiple dimensions of academic work and therefore indirectly lead to heightened levels of academic performance in the formal academic system. Conversely, *the absence of informal student-faculty interactions and/or unrewarding interactions may lead to lower levels of academic performance which may in turn result in academic dismissal from the institution.* Conversely, the character of faculty-student interactions within the formal domains of the academic system, specifically in the classroom, can and do influence

> the likelihood of additional interactions outside the classroom (pp. 117-118, italics mine).

This present research translates the contributions to relationship process of these "interactions between faculty, staff, and students outside the classrooms and offices of the institution" as mentoring. Because the three programs studied have very different levels of mentoring, the importance of both mentors and proteges as engaged actors in the mentoring experience (or lack of a mentoring experience) is investigated in depth with Tinto's theory making continuous contributions to fuller understanding of goal progress in relationships.

Briefly, Tinto's (1975) dropout model demonstrates that

> the process of dropout from college can be viewed as a longitudinal process of interactions between the individual and the academic and social systems of the college during which a person's experiences in those systems...continually modify his goal and institutional commitments in ways which lead to persistence and/or to varying forms of dropout (page 94).

Tinto is especially interested in discerning between academic (i.e., skills development) and social reasons for these events. The purpose of his 1975 article was to "formulate a theoretical model that explains the processes of interaction between the individual and the institution that lead differing individuals to drop out from institutions of higher education, and that also distinguishes between those processes that result in definably different forms of dropout behavior" (page 90).

A common thread running through Tinto's attrition research is that the decision to withdraw or persevere is influenced by the extent to which a student's intellectual and social integration occurs. He states,

> ...the more time faculty give to their students, and students to each other, the more likely are students to complete their education. Both academically and socially, such informal contacts appear to be essential components in the process of social and intellectual development of individuals and in the rewards they seek in entering higher education....institutions should encourage those contacts whenever and wherever possible (1982, page 697).

It is important that this frequent faculty contact occur outside the classroom as well as within the classroom. In fact, Tinto's research shows that this kind of interaction is one of the most important forms of interaction impacting student persistence and has also been shown to be instrumental to a student's intellectual and social development as well. He states that, "the more frequent and rewarding these contacts, especially when they go beyond the requirements of academic work, the greater the likelihood of persistence and high levels of individual growth" (Tinto, 1986, page 37). This, too, is the basis upon which this dissertation research is grounded.

One point especially important to this present research is Tinto's investigation of social conditions of the students and viewing the college as a social system with its own values and social structures. He found that "it is the individual's integration into the academic and social systems of the college that most directly relates to his or her continuance at that college" (1975:96) in that "lack of integration into the social system of the college will lead to low commitment to that social system and will increase the probability that individuals will decide to leave college and pursue alternative activities" (1975:92). In other words, those students who are not sufficiently integrated into the fabric of the college society (e.g., through socialization)--those who, for example, hold values highly divergent from those of the "social collectivity"--many times suffer from insufficient personal interaction with other members of that society. One important point for this present research is that Tinto (1975) suggests there is an association between extent of social contact with faculty and the sex of the student, social contact being somewhat more important for women than men. Drawing on results of this present dissertation research, then, mentoring could and should be considered a significant vehicle for students to achieve both personal and academic socialization. And, essentially, that is what the current mentoring literature also suggests.

Pascarella and Chapman (1983) investigated the validity of Tinto's (1975) model of college withdrawal in different types of institutions (4-year residential; 4-year commuter; and 2-year commuter). They found that their results generally supported the predictive validity of Tinto's model but that there were interesting differences in patterns of influence concerning social and academic integration when the data were disaggregated by institutional type. It was found that social integration played a stronger role in influencing persistence at 4-year, primarily residential institutions (where such interactions were more common), while academic integration was more important at 2- and 4-year, primarily commuter institutions (where social interactions were more difficult to establish). They concluded by stating that "the findings of this study suggest that Tinto's model is a potentially useful framework for understanding the process of student persistence/withdrawal decisions in postsecondary education. The patterns of influence in the model, however, may vary substantially when it is used to explain persistence/withdrawal behavior at different types of institutions" (page 100).

Also important to this present dissertation research is the fact that in his 1975 article Tinto stated that it had not been determined at that time "whether this (model) applies equally well to the various racial minorities that are disproportionately represented in the lower social status categories of college students" (page 119). In a more recent article, Tinto (1982) noted some shortcomings of his 1975 model. Those that are pertinent to this present research include the fact that the model "fails to highlight the important differences in education careers that mark the experiences of students of different gender, race, and social status backgrounds" (page 689). Tinto reiterates that the concept of "integration" (for purposes of this present research--socialization and mentoring) is an important element in educational persistence. But he goes on to say that,

> studies of dropout among specific groups of students, especially among the disadvantaged, may aid in the development of institution and system policies designed and targeted to assist the educational

> continuance of particular subpopulations within the student body....For instance, we could and should explore to what degree varying dropout behaviors among differing groups of students are influenced by various models of academic organization, forms of social organization, (and) modes of informal organization relating to students and faculty...(page 692).

As has been documented earlier in this thesis, women, and especially women students of color (at both the undergraduate and graduate levels), tend to experience stronger feelings of isolation in the higher education system. As demonstrated in this dissertation, Tinto's research on the impact of socialization on students is directly relevant to this present research--in fact, this dissertation research extends (yet specifically focuses) elements of the scope of Tinto's research in that it investigates the impact of mentoring on women students of color.

In a 1988 article, Tinto argued that the process of student persistence (and/or student departure) can be seen as having distinct stages through which students pass during the course of their college years. He likened these stages to anthropological rites of passage:

> Each stage served to move individuals from youthful participation to full membership in adult society, providing, through the use of ceremony and ritual, for the orderly transmission of the beliefs and norms of the society to the next generation of adults and/or new members. In that fashion, such rites served to ensure the stability of that society over time while also enabling younger generations to assume responsibility from older ones (pages 440-441).

For purposes of this current research, this passing on of beliefs and norms of the society (in this case, the "society" of the higher education institution) to the next generation is another way of describing one of the priority functions of mentoring. And it is helpful at this juncture to recognize that there exist priority functions to all relationships, including the "dysfunctional" relationship. The distinction that must be made at this point is that the mentoring relationship occurs in academia when a priority function of that relationship deliberately facilitates the social integration of the student into the unique subculture of the institution. *Quality*

mentoring occurs when many facets of that priority goal are actually achieved. More on this follows below.

Three stages of student departure are discussed in Tinto's 1988 article: 1) the stage of separation; 2) transition to college; and 3) incorporation in college. During the first stage, the stage of separation, students are required to disassociate themselves from membership in their past communities (e.g., various partings from past habits and patterns of affiliation). Understandably, this is a stressful period. Tinto says that,

> This may be especially true for individuals who, for the first time, move away from their local high school communities and families to live at a distant college and/or whose colleges are markedly *different in social and intellectual orientation from that which characterizes the family and local community*....(S)tudents have to disassociate themselves physically as well as socially from the communities of the past. In a very real sense, their staying in college depends on their becoming leavers from their former communities (page 443, italics mine).

Based on this present dissertation research, in the case of women minorities, the separation may be even more marked and traumatic if appropriate personal and academic socialization does not occur. Oftentimes this leads to women students of color experiencing strong feelings of isolation. Thus, the absence of a quality mentoring relationship process may be devastating to retention objectives in certain cases.

The second stage, transition to college, is a passage between the old and the new, the past and the future. During this stage, students are somewhat in a state of limbo--not yet having completely severed relations with the past nor establishing the necessary affiliations in the new community. Students are highly vulnerable to attrition during this stage. This stage may be even more "dangerous" for minority students. As Tinto (1988) states,

> ...persons from families, communities and/or schools which are very different in behavior and norms from those of the college are faced with especially difficult problems in seeking to achieve membership

> in the communities of the college. Their past experiences are unlikely to have prepared them for the new life of the college in the same way as have those of persons who come from families that are themselves college educated. In the "typical" institution, one would therefore expect persons of minority backgrounds and/or from very poor families, older adults, and persons from very small rural communities to be more likely to experience such problems than other students (page 445).

During the third and final stage, incorporation in college, a student has successfully moved away from the norms and behavioral patterns of the past and faces the challenge of finding and adopting appropriate norms of the new society (social and intellectual communities of the college). For purposes of this present research, success in this stage is especially tenuous unless a student's socialization is achieved. The stated focus of this dissertation is that mentoring is a key element to that socialization. In order to establish membership in these social and intellectual communities, a student's "social interactions are the primary vehicle through which such integrative associations arise..." It is stressed that "*individuals have to establish contact with other members of the institution, students and faculty alike.* Failure to do so may lead to the absence of integration and to its associated sense of isolation. These in turn may lead to departure from the institution" (Tinto, 1988, page 446, italics mine). Even though he did not previously specifically use the term "mentoring," in this 1988 article Tinto recommended providing students with orientation programs that "stress forms of contact and *mentorship* that enable new students to become competent members of academic and social communities of the college" (pages 451–452, italics mine). It is the very essence of that "mentorship" that requires the considerations of this dissertation research.

Until recently, Tinto's attrition research has concentrated exclusively on undergraduate students. In 1991 he presented a paper which expanded his research into a theory of doctoral persistence. He found from recent research that contributing factors to doctoral persistence are similar to those of the

undergraduate. He states that "graduate persistence is also shaped by the personal and intellectual interactions that occur within and between the student, faculty, and student-faculty communities that make up the academic and social systems of the institution" (page 2). In graduate education, the importance of faculty in the lives of doctoral students becomes paramount, and quality mentoring should play an important role in this relationship. One point that Tinto makes in this paper is that

> the character of doctoral persistence is likely to be much more a reflection of the particular normative and structural character of the specific field of study and the judgments that describe acceptable performance than of the broader university generally....(Judgements) about their (the students) performance and by extension their persistence within a field of study will be largely conditioned by the particular norms of local groups (page 3).

Logically, then, it can be expected that significant differences exist between different disciplines. Further, because doctoral students' interactions are primarily with departmental faculty, staff, and student peers, doctoral student persistence is more likely to be reflective of the views, beliefs, and norms of that particular community. Tinto concludes that "social integration at the graduate level is more closely tied to that of academic integration than it is at the undergraduate level" (Tinto, 1991, page 3).

At the end of his paper, Tinto (1991) declares that there exists a wide variety of possible further studies on doctoral persistence. His suggestions are pertinent to this present dissertation research. Highlighting the importance of faculty-student interactions (e.g., mentoring), he states:

> ...Given the nested quality of graduate communities, the simple rubric of "student-faculty interaction" will not suffice at the graduate level. We need to uncover the nested effects of different levels of faculty-student interaction and eventually the specific of faculty-advisor/*mentor* relationships upon the likelihood of completion.
>
> And we must do so in a manner that highlights the differential experience of differing students, *especially minority students and persons of different age and gender.* Without belaboring the obvious,

> the issue of minority persistence in graduate education is simply too important not to warrant our immediate attention. Among other things, we must understand the institutional dynamics that characterize successful minority doctoral completion (Thomas, Clewell and Pearson, 1991) and make better sense of the particular attributes of advisors and *mentors* who are successful in assisting minority doctoral completion.
>
> ...(W)e must discern to what degree the effects of fields of study cut across or are conditioned by the broader institutional context within which those studies are carried out. Do the norms of a particular field of study override the institution and/or department specific norms of the particular context within which that study is being pursued?
>
> Since it has long been argued that much of the difference between completion rates in the physical sciences and the social sciences or humanities reflects their differing structure of work--the former stressing apprenticeship/collaborative work, either in classrooms or in research, serves to increase student integration and thereby enhance the likelihood of persistence to degree completion. In effect we must explore how the structure of local communities and their norms regarding student-student and student-faculty relationships shape the completion process (pages 14-15, italics mine).

Erik H. Erikson, selected for depth of psychosocial theory directly relevant to reciprocity factors in relationships, will be discussed next.

Psychosocial Theory Contributing to Mentoring

The term psychosocial basically has two components. The first, referring to the "psycho" part of the term, "consists of the personal, internal, psychologically oriented aspects of individual being that dispose an individual to act or respond in certain ways" (including self, ego, and identity). The second component "refers to the individual's personal orientations to the external world, to the relationships between the self and society. The term is close in meaning to what some call 'personality'" (Pascarella and Terenzini, 1991, page 163). This section explores the psychosocial aspects of college student socialization, and specifically mentoring as a promoter of socialization through a process Erikson calls "generativity."

The main focus of the definition of quality mentoring that was developed as a result of this dissertation research is *reciprocity*. It has been shown (both in the text and in the figures and tables) that a truly meaningful mentoring relationship

is a "two-way" process. The responsibilities and benefits of a quality mentoring relationship are of equal importance to both the mentor and the protege. Long before the benefits and importance of mentoring interactions were "discovered" and more recently studied, Erik Erikson was conducting research on the human life cycle and developing psychosocial theories.

Erikson trained under Sigmund and Anna Freud, specializing in child analysis. After emigrating to the U.S. from Germany in 1933, he became engaged in varied clinical work, widening the scope of psychoanalytical theory to take greater account of social, cultural, and other environmental factors. The study of the human life cycle has immediate applications in a number of fields and is paramount in the science of human development within social institutions (Erikson, 1987:610).

In his most influential book, *Childhood and Society* (1950; 1963), Erikson divided the human life cycle into eight stages of development. The main emphasis of this conception is on the development of human potential (Erikson, 1987:596). These eight stages demonstrate psychosocial turning points or crucial moments ("crises" in Erikson terminology) in the human life cycle.

The Eight Stages of Life (Psychosocial Crises) are:

	Stages	Psychosocial Crises	Basic Strengths	Basic Antipathies
I.	Infancy:	Basic Trust vs. Basic Mistrust	Hope	Withdrawal
II.	Early Childhood:	Autonomy vs. Shame, Doubt	Will	Compulsion
III.	Play Age:	Initiative vs. Guilt	Purpose	Inhibition
IV.	School Age:	Industry vs. Inferiority	Competence	Inertia
V.	Adolescence	Identity vs. Confusion	Fidelity	Repudiation
VI.	Young Adulthood:	Intimacy vs. Isolation	Love	Exclusivity
VII.	Adulthood:	Generativity vs. Self-absorption	Care	Rejectivity

VIII.	Old Age:	Integrity vs. Despair	Wisdom	Disdain

(Compilation of data from: "The Human Life Cycle", in Erikson, 1987:599, 601; *Identity and the Life Cycle*, 1980:129; and *The Life Cycle Completed*, 1982:32-33).

Erikson explains that for each psychosocial stage in the above table is listed a core crisis during which the development of a specific *syntonic* potential (from basic trust--stage I--to integrity--stage VIII) which must outbalance that of its *dystonic* antithesis (from *basic mistrust* to senile *despair*). The resolution of each crisis results in the emergence of a *basic strength* or *ego quality* (from *hope* to *wisdom*). But such sympathic strength, too, has an antipathic counterpart (from *withdrawal* to *disdain*). The human being must be guided during a long childhood to develop *instinctual* reaction patterns of love and aggression that can be mustered for a variety of cultural environments vastly different in technology, style, and world view (Erikson, 1982:80). He continues by stating that "each new human being receives and internalizes the logic and the strength of the principles of social order...and develops the readiness under favorable conditions to convey them to the next generation...oneof the essential built-in potentials for development and recovery...(Erikson,1982:81). To be more specific, Erikson termed this process "generativity," and it is primarily the interest in establishing and guiding the next generation; it is a stage of growth of the healthy personality; and individuals who do not develop generativity often begin to indulge themselves as if they were their own one and only child (Erikson, 1980:103).

Each of these stages has a criterion of relative psychosocial health and the corresponding criterion of relative psychosocial ill-health. As an individual proceeds from stage to stage, wide temporal ranges are possible but the *sequence* of stages remains predetermined (Erikson, 1982:66-67).

Erikson explains:

> in "normal" development, the first must persistently outweigh (although it will never completely do away with) the second. The

> sequence of stages thus represents a successive development of the component parts of the psychosocial personality. Each part exists in some form before the time when it becomes "phase-specific," i.e., when "its" psychosocial crisis is precipitated both by the individual's readiness and by society's pressure. But each component comes to ascendance and finds its more or less lasting solution at the conclusion of "its" stage. It is thus *systematically related* to all the others, and all depend on the proper development at the proper *time* of each; although individual make-up and the nature of society determine the rate of development of each of them, and thus the *ratio* of all of them. It is at the end of adolescence, then, that identity becomes phase-specific; i.e., must find a certain integration as a relatively conflict-free psychosocial arrangement--or remain defective or conflict-laden (Erikson, 1980:128, 130).

For purposes of this dissertation research, the emphasis is upon Stage VII, Adulthood: Generativity vs. Self-absorption. In discussing this stage, Erikson says that humankind has evolved in such a way that we are both a teaching as well as a learning animal (Erikson, 1987:607). In an earlier work, *Childhood and Society* (1963), Erikson states that:

> fashionable insistence on dramatizing the dependence of children on adults often blinds us to the dependence of the older generation on the younger one. Mature man (*sic*) needs to be needed, and maturity needs guidance as well as encouragement from what has been produced and must be taken care of....Generativity, then, is primarily the concern in establishing and guiding the next generation (and)...is an essential stage on the psychosexual as well as on the psychosocial schedule (Erikson, 1963:266-267).

Dependency and maturity are reciprocal in that mature individuals need to be needed, and maturity is guided by the nature of that which must be cared for (Erikson, 1987:607). Erikson's term for this caring is generativity. Generativity is primarily the concern with establishing and guiding the next generation, including productivity and creativity; thus it is psychosocial in nature. From the crisis of generativity emerges the strength of care. Where such enrichment fails, adult self-indulgence becomes damaging to the generational development process (Erikson, 1987:608).

Erikson explains further:

> Generativity is itself a driving power in human organization. For the intermeshing stages of childhood and adulthood are in themselves a system of generation and regeneration given continuity by institutions such as extended households and divided labor.
>
> Thus, in combination, the basic strengths enumerated here and the structure of an organized human community provide a set of proved methods and a fund of traditional reassurance with which each generation meets the needs of the next....
>
> Care is the broadening concern for what has been generated by love, necessity, or accident--a concern which must consistently overcome the ambivalence adhering to irreversible obligation and the narrowness of self-concern.
>
> Psychosocial strength...depends on a total process which regulates individual life cycles, the sequence of generations, and the structure of society simultaneously, for all three have evolved together (Erikson, 1987:608-609).

Erikson says that generativity encompasses *procreativity, productivity,* and *creativity,* and thus the generation of new beings as well as of new products and new ideas, including a kind of self-generation concerned with further identity development. A sense of stagnation, in turn, is by no means foreign even to those who are most intensely productive and creative, while it can totally overwhelm those who find themselves inactivated in generative matters. The new "virtue" emerging from this antithesis--Care--is a widening commitment to *take care of* the persons, the products, and the ideas one has learned *to care for.* All the strengths arising from earlier developments in the ascending order from infancy to young adulthood (hope and will, purpose and skill, fidelity and love) are essential for the generational task of cultivating strength in the next generation.

He says, further, that a new generative ethos may call for a more *universal care* concerned with a qualitative improvement in the lives of all children. A person in adulthood must also realize and understand that a generator will be survived by what he generated (Erikson, 1982:67-68; 79-80). Mentoring, then, is an excellent vehicle for passing on customs and knowledge to a new generation (protege) as well as contributing to a healthy personality through generativity for the mentor.

Erik Erikson (1964) reached a degree of depth, comprehensiveness, and realism in his conceptualization of mentor-like and protege-like human behaviors

and human valuations of behaviors. For example, the following statement made three decades ago, could very well apply to today's concept of the role of a mentor:

> Care is a quality essential for psychosocial evolution, for we are the teaching species. As man (*sic*) transmits the rudiments of hope, will, purpose and competence, he imparts meaning...he conveys a logic much beyond the literal meaning of the words he teaches, and he gradually outlines a particular world image and style of fellowship. Once we have grasped this interlocking of the human life stages, we understand that adult man is so constituted as to need to be needed lest he suffer the mental deformation of self-absorption, in which he becomes his own infant and pet. Parenthood is, for most, the first, and for many, the prime generative encounter yet the perpetuation of mankind challenges the generative ingenuity of workers and thinkers of many kinds. And man *needs* to teach, not only for the fulfillment of his identity, but because facts are kept alive by being told, logic by being demonstrated, truth by being professed. Thus, the teaching passion is not restricted to the teaching profession. Every mature adult knows the satisfaction of explaining what is dear to him and of being understood by a groping mind (Erikson, 1964, pages 130-131).

In a like manner, the following statement could very well be describing the contemporary role of a protege in a mentor-protege relationship:

> Identity and fidelity are necessary for ethical strength, but they do not provide it in themselves. It is for adult man (*sic*) to provide content for the ready loyalty of youth, and worthy objects for its need to repudiate. As cultures, through graded training, enter into the fiber of young individuals, they also absorb into their life-blood the rejuvenative power of youth. Adolescence is thus a vital regenerator in the process of social evolution; for youth selectively offers its loyalties and energies to the conservation of that which feels true to them and to the correction or destruction of that which has lost its regenerative significance. As the young adult selects those who in turn will select him--as members, friends, mates and co-workers--he completes the foundation for the adult virtues. His identity and his style of fidelity define his place in what history has determined as his environment; but so does his society define itself by the way it absorbs (or fails to absorb) his powers of solidarity (pages 126-127).

Following Erikson's lead, then, the point is that the mentor and the protege each make a contribution to a quality mentoring relationship. Where and when the relationship is more one sided, the relationship suffers as does the quality of the mentoring.

The Anderson-Shannon Model

The 1988 article entitled, "Toward a Conceptualization of Mentoring" by Anderson and Shannon is the basis upon which the **Quality Mentoring Model (QMM)** was developed. Their mentoring model (see Figure 6) summarizes what to them are the essential components of mentoring. They state: "...basic to mentoring is a relationship in which the protege views the mentor as a role model and the mentor nurtures and cares for the protege."

Even though this model is credited with sparking the idea for the current model, it is evident that the Anderson-Shannon definition and model are very much one-sided. The mentor is responsible for the mentoring relationship. The current model incorporates the Anderson-Shannon framework and the mentor's functions of teaching, sponsoring, encouraging, counseling and befriending, but this is only half of the model.

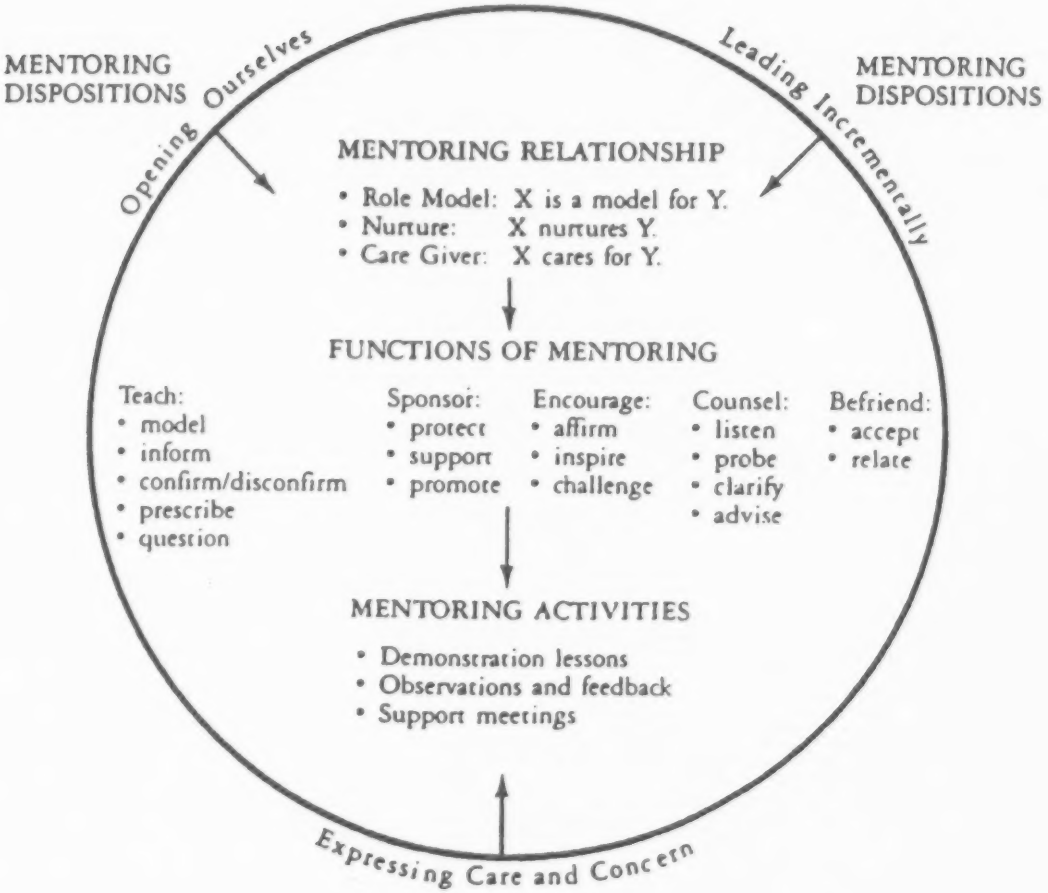
As is emphasized throughout this dissertation, for me, the critical element in a meaningful mentoring relationship is reciprocity. A model utilizing this component was not found in any of the literature reviewed; therefore, this researcher is striving to make a contribution to the field of higher education with the introduction of a model that incorporates the roles of both the mentor and the protege and stresses the reciprocal nature of that interaction.

QUALITY MENTORING MODEL (QMM)

In a "traditional" mentoring relationship (such as the Anderson-Shannon model), proteges are the ones who gain the most from the relationship. In addition to the Anderson-Shannon functions listed above, mentors may also provide the protege with a number of other benefits such as (refer to Table 6): individual recognition and encouragement; honest criticism and informal feedback; advice on how to balance teaching, research, and other responsibilities and set professional priorities; knowledge of the informal rules for advancement (as well as political and

FIGURE 6

Anderson and Shannon Mentoring Model



Source: Anderson and Shannon (1988)

substantive pitfalls to be avoided); information on how to "behave" in a variety of professional settings; skills for showcasing one's own work; an understanding of how to build a circle of friends and contacts both within and outside one's institution; a perspective on long-term career planning; involvement in joint projects; sponsorship by introducing the protege to top authorities in the field; talking up the protege's research to senior colleagues; and nominating for awards or prizes.

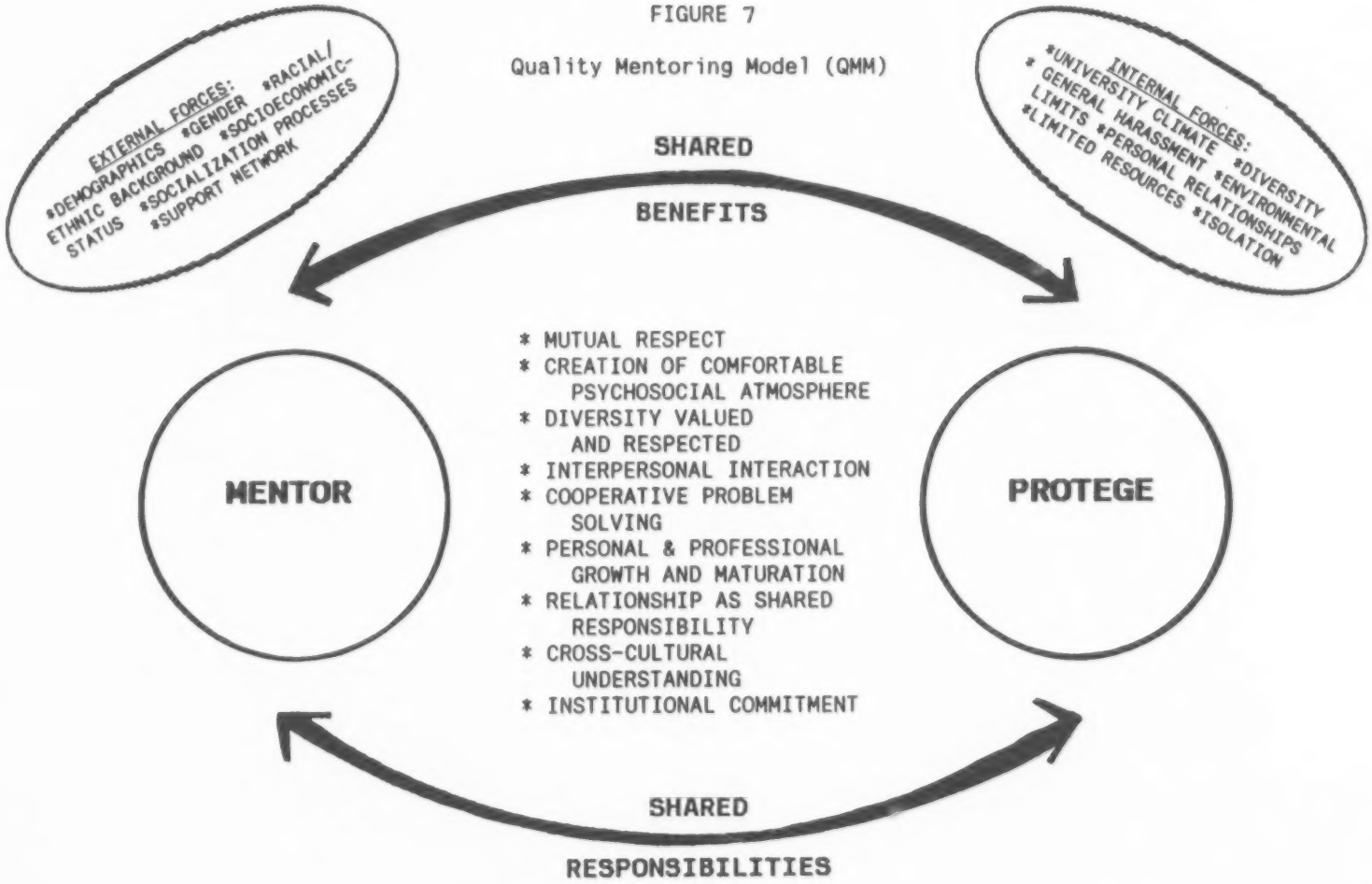
In the Quality Mentoring Model, the responsibilities of the protege to the generativity of the mentor are of equal importance. As shown in Table 6, the protege provides for the mentor: the satisfaction of helping in the development of another person who may carry on his or her own work; ideas for and feedback about his or her own projects from a junior person who is eager to learn and is committed to the project's success; a network of former proteges at other institutions who can collaborate on projects and help place students--thus increasing the mentor's power and visibility; and becoming part of an expanded network of colleagues, especially if the mentor takes part in a formal mentoring program.

The conceptual framework--**the Quality Mentoring Model (QMM)**--expands upon the current conceptual levels to include the realities of mentor-protege shared responsibilities and benefits in productive mentoring processes. The direct relationship between the Quality Mentoring Model and testing the new conceptual framework provided documentation to establish a fresh and more accurate means to understand what quality mentoring is. By testing the new model in three programs at the University of Minnesota, a serious attempt is made to study the mentoring relationships and to determine the degree to which *quality* (reciprocal) mentoring occurs in these three programs. "Reciprocal" as used in this study is synonymous with what can be termed "mutual mentoring."

As can be seen in Figure 7, the **Quality Mentoring Model** has expanded upon the Anderson-Shannon model in order to include the role responsibilities of the

FIGURE 7

Quality Mentoring Model (QMM)



protege as well as the mentor. The arrows indicate the reciprocal aspect of the model. The mentor is providing encouragement for the maturation (the transformation from the status of understudy to that of a respected individual) and growth of the protege. The protege, in true Eriksonian terminology, provides the mentor with stimulation for generativity (a term meaning a transcendence of stagnating self-preoccupation via exercise "of an instinctual drive to create and care for new life"). As such, a core ingredient for quality mentoring is at one and the same time the proactive and reactive characteristics of both individuals.

CHAPTER III

RESEARCH METHODOLOGY

RATIONALE

Qualitative Research Methodology

The research methodology chosen for this present dissertation research is qualitative research in general, and case study methodology specifically. The qualitative research model was developed primarily in the social sciences and has been applied to problems in other disciplines only in recent years (Borg and Gall, 1989). In the last decade, qualitative research has come of age in the field of higher education (Tierney and Lincoln, 1994) and is being utilized as a useful and meaningful methodology by an increasing number of researchers. Miles and Huberman (1994) state that

> Qualitative data, usually in the form of words rather than numbers, have always been the staple of some fields in the social sciences, notably anthropology, history, and political science. In the past decade, however, more researchers in basic disciplines and applied fields (psychology, sociology, linguistics, public administration, organizational studies, business studies, health care, urban planning, educational research, family studies, program evaluation, and policy analysis) have shifted to a more qualitative paradigm (page 1).

They continue by saying that qualitative methodology offers

> well-grounded, rich descriptions and explanations of processes in identifiable local contexts... (that) preserve chronological flow (so that one can) see precisely which events led to which consequences, and derive fruitful explanations; help(s)... researchers to get beyond initial conceptions and to generate or revise conceptual frameworks.... (Qualitative methodology has) a quality of "undeniability." Words, especially organized into incidents or stories, have a concrete, vivid, meaningful flavor that often proves far more convincing to a reader...than pages of summarized numbers" (page 1).

In short, qualitative research has found a place of respectability for many researchers, including those outside traditional fields such as anthropology. It should be noted that my own educational background and experience in anthropology gave support and credence to the choice of qualitative research methodologies for this dissertation research.

In looking at the field of higher education specifically, the merits of qualitative methodologies become apparent. For example, one of Pascarella and Terenzini's (1991) recommendations for future research on college impact is that there

> should be a greater dependence on naturalistic and qualitative methodologies. When employed judiciously, such approaches are capable of providing greater sensitivity to many of the subtle and fine-grained complexities of college impact than more traditional quantitative approaches....We anticipate that in the next decade important contributions to our understanding of college impact will be yielded by naturalistic investigations (page 634).

The philosophical assumptions that are the foundations of qualitative research as outlined by Merriam (1988) were applicable to this dissertation research. These assumptions include:

> ...qualitative research strives to understand how all the parts work together to form a whole....[It] assumes that there are multiple realities...a highly subjective phenomenon in need of interpreting rather than measuring....Research is exploratory, inductive, and emphasizes processes rather than ends...there are no predetermined hypotheses, no treatments, and no restrictions on the end product (pp. 16-17).

Qualitative research is most appropriate when: 1) the questions being posited are *how* or *why*; 2) when the researcher has little or no control over events; and 3) when the topic is contemporary (as opposed to historical) (Yin, 1989).

These three criteria were fulfilled in this study. First, the questions in this study focused on three programs at the University of Minnesota that are designed especially for the recruitment and retention of persons of color, and focused

particularly on women within those programs. The quantity and quality of mentoring and *how* mentoring affected these women was examined. The second condition was also fulfilled because this researcher had no control over the actual events of the study. Thirdly, mentoring is certainly a contemporary topic, especially in light of its recent entrance into the higher education arena.

Qualitative research, then, allows study in depth and in detail. Patton (1990) wrote that qualitative methods of research produce a wealth of detailed information about a smaller number of people or cases. Lincoln (cited in Miles and Huberman, 1994, page 280) considers good qualitative research as enhancing "(a) levels of understanding and sophistication and (b) the ability of participants and stakeholders to take action during and after an inquiry and to negotiate on behalf of themselves and their own interests in the political arena." One of the goals of this present research is not only to convey the findings to the administrators in the three programs studied but also to make the findings available to key influential administrators in central administration at the University of Minnesota.

Case Study Methodology

In discussing case study methodology as a particular form of qualitative research, Merriam (1988) says:

> The case study offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon. Anchored in real-life situations, the case study results in a rich and holistic account of a phenomenon. It offers insights and illuminates meanings that expand its readers' experiences. These insights can be construed as tentative hypotheses that help structure future research; hence, case study plays an important role in advancing a field's knowledge base. Because of its strengths, case study is a particularly appealing design for applied fields of study such as education. Educational processes, problems, and programs can be examined to bring about understanding that in turn can affect and perhaps even improve practice. Case study has proved particularly useful for studying educational innovations, for evaluating programs, and for informing policy (pp. 32-33).

A qualitative case study methodology was selected in order to study the complex process of mentoring in a real-life context. The comparative case study methodology utilized in this present study followed closely Yin's guidelines for "literal replication" as outlined in *Case Study Research* (1989). This process includes the following steps:

1. Establishment of a theoretical framework;
2. Review of previous studies in area of research;
3. Case sites selected;
4. Establishment of data collection procedures and instruments;
5. Data gathered, analyzed, and reported for each individual case site;
6. Completion of cross-case analysis and reporting including common conclusions, theories, and implications.

He added that case studies may be the most appropriate research method to utilize in reviewing the complexities of organizational phenomena.

Tinto (1991) is of the belief that both quantitative and qualitative methodologies must be utilized by researchers. According to him, qualitative research methodologies

> are needed to probe the meanings differing individuals attach to their experience as they take place within an observable sphere of personal interactions. Those understandings, more than any set of longitudinal path equations, help us to make sense of why it is that particular types of experiences lead to differing types of outcomes for different individuals. At the same time, they enable us to uncover the complex ways in which the social context of academic studies (e.g., the prevailing social norms of a given field of study and the values of people within the communities of those fields) come to condition the impact of academic experiences upon student success (page 15).

This dissertation research basically utilizes qualitative methodologies but also includes some quantitative data as well; therefore, presenting a more in-depth and complete "picture" of what was occurring in the three programs examined at the time the research was conducted.

Potential Problems With Using Qualitative Research Methodologies

Borg and Gall (1989) state that:

> Most case studies are based on the premise that a case can be located that is typical of many other cases, that is, the case is viewed as an example of a class of events or a group of individuals. Once such a case has been located, it follows that in-depth observations and collection of other data about the single case can provide insights into the class of events from which the case has been drawn. Of course, there is no way of knowing how typical the selected case really is, and it is therefore rather hazardous to draw any general conclusions from a single case study. However, this problem can be greatly reduced by multiple-case studies...(page 402).

This potential problem was anticipated and was overcome in the present research study because multiple case study sites were examined and compared.

Validity and reliability are important components of any research inquiry. But some individuals have indicated that accomplishing reliability and validity in the traditional sense when the task is qualitative research may be more difficult. The nature and intention of qualitative research requires an approach to these components that differs from quantitative research methods.

Qualitative research methods seek concepts such as "truth value" for internal validity, "transferability" for external validity, and "consistency" for reliability (Lincoln and Guba, 1985; Miles and Huberman, 1994). The tenets of qualitative research, therefore, require that the investigator explain assumptions, theoretical bias, relationship to the group under study, and the sampling rationale. This was accomplished as explained earlier in this dissertation.

Internal validity questions the match between reality and the findings. Internal validity asks questions such as: Do the findings of the study make sense? Are they credible to the people studied and to the readers? Does the research paint an authentic portrait of what is being studied? It is important to stress that qualitative research assumes that there are multiple realities and that representing participants' *perceptions* of reality is the goal of the research effort. This can be

strengthened by incorporating specific strategies into the project design. Four of these strategies were appropriate to and used in the present research project. They are: 1) triangulation; 2) having participants review conclusions; 3) peer examination; and 4) stating researcher biases (Merriam, 1988).

Maxwell (cited in Miles and Huberman, 1994, page 278) distinguishes among the types of *understanding* that may emerge from a qualitative study: 1) descriptive (what happened in specific situations); 2) interpretive (what it meant to the people involved); 3) theoretical (concepts, and their relationships, used to explain actions and meanings); and 4) evaluative (judgments of the worth or value of actions and meanings). All of these "types of understanding" were achieved in this present study.

Warner (cited in Miles and Huberman, 1994, page 278) speaks of "natural" validity--the idea that the events and settings studied are uncontrived, unmodified by the researcher's presence and actions. With this in mind, I was careful to remain "beige" (unbiased) during both data collection and data analysis phases of research. Kvale's emphasis (cited in Miles and Huberman, 1994, page 279) is on validity as a process of checking, questioning, and theorizing, as opposed to a strategy for establishing rule-based correspondence between findings and the "real world."

Miles and Huberman (1994) offer a compilation of useful queries regarding internal validity. This researcher pondered each of these queries throughout the duration of the research project. These internal validity queries are:

1. How context-rich and meaningful ("thick") are the descriptions?
2. Does the account "ring true," make sense, seem convincing or plausible, enable a "vicarious presence" for the reader?
3. Is the account rendered a comprehensive one, respecting the configuration and temporal arrangement of elements in the local context?

4. Did triangulation among complementary methods and data sources produce generally converging conclusions? If not, is there a coherent explanation for this?

5. Are the presented data well linked to the categories of prior or emerging theory? Do the measures reflect the constructs in play?

6. Are the findings internally coherent; are concepts systematically related?

7. Are areas of uncertainty identified? (There should be some).

8. Was negative evidence sought for? Found? What happened then?

9. Have rival explanations been actively considered? What happened to them?

External validity focuses on the generalizability of findings to other situations; e.g., do conclusions of a study have any larger import? Are they transferable to other contexts? Do they "fit" (Lincoln and Guba, 1985)? How far can they be "generalized" (Miles and Huberman, 1994)? The nature of the case study requires **generalizability** to theory. This is quite different from other forms of methodology that take a sample and generalize to a population. Case studies are not sampling units. Instead, when utilizing a multiple case research design, theory is used as a template, with the results of the cases being compared. However, generalizability is improved when the qualitative researcher provides in-depth descriptions of the case and through use of cross-site or cross-case analysis. This has been accomplished in this dissertation research project and is described in detail in the individual case studies.

A case study utilizing case study methodology such as the present one is based on the premise of a unique situation. As stated earlier, this study examined three specific programs in three different colleges in one large, urban university setting. Qualitative research aims to provide perspective rather than conclusions. Validity for the qualitative researcher, then, is determined by how well the

researcher can discern the similarities and differences in the situations and utilizing those which are relevant. With this in mind, the following relevant queries regarding external validity are helpful and were carefully considered in the present research project (Miles and Huberman, 1994):

1. Are the characteristics of the original sample of persons, settings, processes, etc. fully described enough to permit adequate comparisons with other samples?
2. Does the report examine possible threats to generalizability? Have limiting effects of sample selection, the setting, history and constructs used been discussed?
3. Is the sampling theoretically diverse enough to encourage broader applicability?
4. Does the researcher define the scope and the boundaries of reasonable generalization from the study?
5. Do the findings include enough "thick description" for readers to assess the potential transferability appropriate for their own settings?
6. Are the findings congruent with, connected to, or confirmatory of prior theory?
7. Have narrative sequences (plots, histories, stories) been preserved unobscured? Has a general cross-case theory using the sequences been developed?

Reliability of a study challenges the consistency of the process. Relevant questions to be considered for reliability include (Miles and Huberman, 1994):

1. Are the research questions clear and are the features of the study design congruent with them?
2. Is the researcher's role and status within the site explicitly described?
3. Do findings show meaningful parallelism across data sources (informants, contexts, times)?

4. Are basic paradigms and analytic constructs clearly specified? (Reliability depends, in part, on its connectedness to theory).

5. Were data collected across the full range of appropriate settings, times, respondents, and so on suggested by the research questions?

6. Were coding checks made, and did they show adequate agreement?

7. Were data quality checks made (e.g., for bias, deceit, informant knowledgeability)?

8. Do multiple observers' accounts converge, in instances, settings, or times when they might be expected to?

9. Were any forms of peer or colleague review in place?

In summary, qualitative case study methodology presents unique problems for reliability, validity, and generalizability. However, the utmost care for standard procedure in these areas was taken and all of the questions listed above were carefully considered by this researcher.

Specifics Related to this Dissertation Research

The purpose of this dissertation research study was to investigate the effect mentoring had on the recruitment and retention of women students of color in three programs at the University of Minnesota. Qualitative research methodologies, and specifically case study methodology, were utilized. Three sites, or cases, were the focus of this study. These three sites were selected because they offered diversity both in program characteristics (e.g., widely varied disciplines were chosen and included both undergraduate and graduate level women students of color) and level of mentoring offered (ranging from mentoring being the focus of the program to no mentoring existing in the program). Because multiple case analysis is considered a stronger research design and because results obtained from this kind of research is considered more compelling than single site case research, multiple case analysis was utilized in this study.

Primary Data. Complying with the rigors of current qualitative research methodological techniques, open ended, in-depth interviews were conducted and tape recorded (with the permission of the interviewees) and data were gathered in order to determine consistent patterns of the participants with respect to impacts of mentoring. All tapes were transcribed verbatim as soon after the interview as possible. In addition, careful handwritten notes on accompanying nonverbal behaviors and gestures were taken during the interviews and became components to the body of data subject to analysis. At the time of the interview, each participant (student, faculty, and administrator) signed a consent form and filled out a demographic data sheet that contributed more in-depth, personal information to the study.

Secondary Data. Background information and data on each of the three programs were gathered from published program literature and statistics as well as written information (e.g., reports) and verbal accounts from the administrators who were directly responsible for each program. Initially, this researcher met with each of the administrators of the three programs before determining the appropriateness of each program for this present study.

A list of names and addresses of women participants in each program was obtained. Introductory letters detailing the purpose of the study and asking for permission to contact potential participants were sent to each woman listed. When permission for an interview was granted, a follow-up phone call was made to set up a time and place to meet for an in-depth interview.

For the program that had mentoring as an integral part of it (Program B), a list of corresponding faculty mentors' names and campus addresses was also obtained. Mentors for the women students were contacted and interview appointments were made over the phone.

The interviews followed a specified set of queries based on the research questions. A semi-structured questionnaire was used for each of the three groups.

The underlying design of the semi-structured questionnaire was conceived as a result of earlier research by this researcher and others, including my advisor. The questionnaire was expanded for purposes of this research and all questions relating to mentoring were written by this researcher specifically for this research project. Questions for the mentoring section of the interview were written with various research studies in mind, paying special attention to pertinent definitions and how they tied into the conceptual framework of the study. In the interview protocol, each student was asked if they perceived mentoring as a part of their program. Students were also asked to define in their own words what mentoring is and what it means to them. Ample encouragement and time was given to support spontaneous responses.

The interview questions were deliberately structured so as not to restrict interviewee comments. In other words, in this semi-structured, open-ended interview protocol, there were an adequate number of probing questions, a tone of encouragement by the interviewer to elicit information directly related to these factors, and an ample opportunity for the interviewee to answer each question substantively. See Appendix C for examples of each of the three questionnaires (one for students, one for administrators, and one for faculty). The length of each interview ranged from 30 minutes to 1-1/2 hours. All interviews were tape recorded, coded for confidentiality, and transcribed verbatim. Students, faculty, and administrators were all asked questions directly related to the program as well as questions relating to mentoring in each program.

Data Analysis. From the outset of this study, it was intended that the computer software package Tally would be utilized for data analysis. After studying the Tally documentation, it was believed that it would provide the depth of data analysis necessary. However, after going through the tedious process of hand coding the interviews from Programs A and C and then entering the data into the Tally database using Tally formatting, it was found that Tally did not have the

necessary flexibility or capability to identify dominant data patterns and pattern match all interviewee stated perceptions on related topics. As pattern identification and pattern matching were crucial elements to this study's data analysis, it was decided that Tally would not meet my data analysis needs. A data analysis procedure utilizing hand coding and analysis that met this study's needs was developed.

Interview tapes were transcribed onto an IBM-compatible computer into WordPerfect 5.1 word processing software. Each interview was transcribed, printed out, examined carefully for accuracy, and any necessary changes were made.

A coding plan was developed and care was taken to ensure that all interview files were coded (both by hand and in WordPerfect 5.1) with consistent emphasis on both specific interview questions as well as this study's research questions. This method of treating each of the interview files in exactly the same manner throughout the study ensured that data was treated equitably irregardless of source or slight variations in original interview steps or stages.

A list of 11 mneumonics was generated. It was decided to develop a numeric list rather than an alpha listing due to the ability to condense a larger amount of material under each mneumonic. These mneumonics, then, formed the basis for the subtopics within each of the case studies. The mneumonic list generated is as follows:

1) anything relating to program description from all interviews;

2) expectations of the program;

3) anything pertaining to description of undergraduate institution;

4) comparison of undergraduate institution and the University of Minnesota (institutional climate, student's culture "fit" to program, discrimination);

5) student relationships with other students;

6) faculty relationships (e.g., do you have a mentor?);

7) if have mentor, what are relationships, experiences;

8) faculty mentors – responsibilities and experiences with proteges;

9) socialization: sources of support (personal and academic) – mentoring (student or faculty or administrator or family);

10) financial support;

11) overall evaluation of program comments (interviewees' summary comments).

Information from the demographics questionnaires was manually analyzed and tabulated by the researcher and data were included in the text of this dissertation.

Finally, brief, follow-up interviews with each of the administrators were conducted in late 1995 for the purpose of obtaining follow-up information on the programs related to mentoring and also to determine the status of those students interviewed (e.g., if an undergraduate, did she enter graduate studies? If students were enrolled in a graduate program at the time of the initial interview, are they continuing or have they graduated by now? Has mentoring had an effect on any of these decisions?)

The following three chapters are the case studies for each of the three programs. As indicated at the beginning of this research study, the overarching research questions investigated in these case studies are:

- How do students and faculty/staff perceive the mentoring process within three University programs designed especially for the recruitment and retention of persons of color? And,
- How do these preceptions illuminate the Quality Mentoring Model (QMM)?

For each of the case studies, the following information is given:

1) description of the program (information obtained from both program documention and in-depth interviews);

2) demographics of student respondents (information procured from demographics sheets);

3) for Program B, where mentoring is a formalized part of the Program, demographics for faculty mentors are also given;

4) for graduate programs A and C, comparison of undergraduate institution with University of Minnesota;

5) socialization factors: personal and academic (keeping in mind Tinto's attrition theory);

6) for Program B, faculty mentor responsibilities (as expressed in the interviews) are also given (keeping in mind Erikson's Eight Stages of Life, especially the theory of generativity);

7) respondents' (students, mentors, administrators) overall evaluation of program; and

8) at the end of each case study, dimensions of mentoring that embody the Quality Mentoring Model (QMM), as well as those that are lacking in QMM characteristics, are given and supported by examples from each Program.

CHAPTER IV

CASE STUDY #1: PROGRAM A
PROFESSIONAL MASTERS DEGREE PROGRAM

DESCRIPTION OF THE PROGRAM

Program A is a small, deliberately-structured program within a larger graduate-level professional program. A professional master's degree program for American Indians, it began in 1990 and is co-sponsored by an American Indian organization in Washington, D.C. and a professional school at the University of Minnesota. This is the only program of its kind in the United States. The Program's objective is to provide professional training to Native Americans planning to become involved in tribal management activities, with a larger goal of aiding eventual tribal financial self-sufficiency. Mentoring is not a formalized part of this program. See Figure 8 on the next page for a summary of Program A.

One program administrator (A3) stated that another goal of this program is to give students a glimpse into the kind of world in which they will have to function. He stated, for example, that a number of tribes in Minnesota are actively involved in gaming casinos in a large way. As a result, the tribes have been forced to face many issues related to the dominant culture. He stated that, "given the level of complexity of the world we live in, the sophistication of people who are involved in those operations needs to be increased." He felt that Program A provides students the skills and knowledge to be more valuable to tribal structures.

Students in Program A are evaluated for admission with the same criteria used to select all students for the "parent" professional program. These criteria include graduate entrance examination scores, undergraduate grade point average (GPA), relevant experience, and the ability to communicate effectively. The Program administrators stated that students in Program A have not enrolled in tribal colleges because they do not provide the quantitative background necessary for

FIGURE 8

Program A

PROGRAM A

- MASTERS DEGREE - PROFESSIONAL SCHOOL
- ESTABLISHED IN 1990
- AMERICAN INDIANS
- MENTORING IS NOT A PLANNED PART OF PROGRAM
- MINORITY STUDENTS ARE SOMEWHAT UNDERREPRESENTED
- MINORITY FACULTY MEMBERS GREATLY UNDERREPRESENTED

this program. Rather, Program A participants have graduated from private or public undergraduate institutions with no tribal affiliation.

The professional program makes the final decision regarding admission to the professional school. The Washington, D.C. agency decides whether the student will be part of Program A within the professional school. All students in Program A are provided with financial support for the two years required for Program completion. Full tuition and fees for six quarters (two academic years) are covered by a fellowship from the professional school. An allowance toward living expenses during this period is provided by the Washington, D.C. agency.

The Twin Cities of Minneapolis and St. Paul were chosen for the site of Program A for at least two reasons. First, there is a relatively large population of American Indians in the immediate geographic area. Second, the University of Minnesota has a Public Affairs program that offers environmental and public affairs courses that are incorporated into Program A students' curriculum. Examples of some of these courses include: land use; community-based community and economic development; financial management in public and nonprofit organizations; development administration; energy policy; energy resource use and systems change; environmental policy; and intergovernmental relations. Students take 50 credits in the professional program and an additional 28 credits of elective courses, 14-15 credits of which are taken in public affairs.

Beyond the curriculum requirements, students are encouraged to participate in an internship during the summer between the two academic years of study. In addition, they are required to complete one year of paid work effort in a tribal setting upon graduation. They do not have to return to their own specific tribe in order to fulfill this requirement but, rather, the employment requirement can be completed in a broad sense. For example, one of the women interviewed during this research (S1) was hired to work in administration at a Minnesota Indian-owned and

managed casino upon graduation, even though she was originally from an Oregon-based tribe.

An irony surfaced during the 1993 interviews regarding the first three years of the program's operation. Some of the tribes have given evidence of a need to be educated about this new resource because frequently they do not know what to do with the graduates. A woman student who stayed in Minnesota to fulfill her one-year obligation rather than return to Oregon (S1) is one example of a tribe that neither understood what she had been through in the program, nor what she could offer them. Therefore, she did not return to her tribe upon graduation.

DEMOGRAPHICS OF STUDENT RESPONDENTS

Of the five American Indian women students in Program A during the period interviews were conducted (1992 and 1993), three were interviewed (60 percent). All are citizens of the United States. These students were all first-generation college students.

One student was single (S17), another was divorced with one child (S1), and the third was married with children (S19). All were from outside Minnesota (Oklahoma, Oregon, and Idaho, respectively). The ages of women interviewees from Program A at the time of the interviews ranged from 22 to 51 years of age.

For one student, both parents were American Indian; the other two students had American Indian mothers and Caucasian fathers. Mothers of these students had high school educations (two receiving GEDs). One father had an eighth grade education, another had a high school education. The educational level of the third student's father was unknown. One student's mother was unemployed, one mother was a student in a nursing program, and one mother was employed as a secretary. One student's father was deceased, one student's father worked in industry, and the employment of the third student's father was unknown.

The retention and graduation rate for the three students interviewed from Program A was 100 percent. S1 was one of the first two students (both women) to enter Program A. She entered the program in Fall 1990 and graduated in Spring 1992. S17 and S19 both entered Program A in Fall 1992 and graduated in June 1994.

COMPARISON OF UNDERGRADUATE INSTITUTION WITH UNIVERSITY OF MINNESOTA

The three women students interviewed from Program A all agreed that the University of Minnesota was very different from their undergraduate institutions. Two of the students came from small colleges (e.g., one student's undergraduate institution had a student population of approximately 2,200 and the largest minority group at that institution was American Indian). The third student came from a larger, predominantly White university, but that institution had a student population of approximately 24,000, as compared to the University of Minnesota with a student population of approximately 40,000.

Two administrators interviewed from this program also agreed that the University of Minnesota climate for American Indian students is very different. Many of the University of Minnesota majority students are not as accepting of American Indian students, one administrators declared, because they probably will not be going into the same areas of interest as the majority because "that is not what they are here for" (A2). This administrator went on to say that Program A students' long-range goals are very different from the majority because they are expected to go back to their tribes, at least to fulfill their one-year service commitment. Administrators went on to state that there is more to this topic, however.

An interesting and insightful comment was made by administrator A3 regarding the difficulties these students have with the dominant culture. He stated that their difficulties, primarily, were not academic but, rather, were in "adjusting

to a dominant culture that is very alien to them." This administrator stated further that

> These students find it very difficult to socialize into a dominant American culture and that's one of the reasons that they are such an underrepresented minority in higher education....They have some profoundly mixed feelings about being in the Program....There is a clash of cultures in the Program....They typically prefer to stick to their own ways (A3).

Inherent in the observation is the fact that all human interaction is just that. These administrators did not suggest that the minority students were the only actors on the scene. The "clash" described very definitely involved input by the dominant culture.

Some differences of institutional culture mentioned by the women student interviewees included teaching methodologies and the instructors. One student (S1) stated that she was disappointed by the instructors at the University of Minnesota. At her undergraduate institution, she felt there were some very talented instructors who had experience in the "real world" and they brought that experience with them into the classroom. They had interesting stories and comments and personal stories that were especially helpful with theories and concepts and their application to everyday living situations. S1 also mentioned that at her undergraduate institution she had a chance to apply what she learned in the classroom to her job. For example, she was able to use her tribe as the basis for a class project and then apply certain concepts she learned during class to her tribe. She would then write a paper on the application of the concepts.

In addition, instructors in these women's undergraduate courses were depicted generally as being more flexible and supportive than the professors at Minnesota. At times, these students encountered abrasive instructors in this school at the University. At one point, S1 was having such a difficult time dealing with communications from one instructor, she knew neither if she would be able to

pass the class, nor whether she would be able to complete the Program. Yet, her capacity to succeed in other courses was clear.

Another student (S19) said that she received excellent instruction at her undergraduate institution. As a matter of fact, she stated that because they had such good courses (in her undergraduate major), she was waived out of six core courses in her graduate work at the University of Minnesota. She liked the fact that this gave her more options for elective courses. S19 went on to say that she received better advice (or at least *more* advice) from her undergraduate professors. She could "go in and talk to them and I felt like my questions got answered." She said, "I'm not so sure I feel that way here" (S19). A significant difference in the level of quality of relationship between student and instructor was clearly stated in these assessments of the two institutions.

The third student (S17) said that she received excellent instruction at her undergraduate institution in her major but that "they gave you the tools but didn't tell you really what they were for, or tell you how to use them" (S17). She went on to say that in Program A, "the classes that I'm taking make the classes that I took at (undergraduate institution) seem so much more relevant and it teaches me how to *apply* what I learned before" (S17). She did note that this might be due to the difference of approach between the undergraduate and graduate educational experience. This student (S17) did not voluntarily proceed to describe how much more she was learning at the graduate, as opposed to the undergraduate level, in terms of substance, and tended generally to be somewhat reluctant to criticize.

Competition is a built-in part of Program A. The very concept of competition goes against the roots of the American Indian culture which tends to be very family-oriented and team-oriented. Administrator A3 noted that, "All notion of a competitive society...is very different than their traditional culture." He said that these students

> have a great deal to teach us, all of us. I don't think many of us believe that, but they do. I've been very careful not to aggressively pursue a path where they would be socialized to the extent of losing their identity....We are trying to provide them with knowledge and skills that they can go back and use to the betterment of the tribe (A3).

In keeping with that insight, as stated earlier, these students were required to take a number of elective courses in another college of the university. These women found that students in the other college were "a whole different breed" (S1). They described the Public Affairs students as being concerned with the environment as well as public interests, were more laid-back, and there was very little competition. They also emphasized that a number of instructors in the other college were teaching how to apply the concepts and theories to real-world situations.

On the subject of acts of prejudice, when these students were asked if they experienced any derogatory or racist remarks, S17 stated, "I don't believe that they *realize* that it's derogatory. I don't think they understand" (S17). She was upset by comments made by some majority students regarding football teams changing their names. At the time, football teams using Indian culture oriented names (e.g., Braves or Redskins) were in the national spotlight. She said that the majority students did not consider use of these team names derogatory. She said:

> It really bothers me that people don't seem to understand that that just reinforces the same stereotypes....No one in my family--I'm half White and half Indian--so I'm very light complected but most of the people in my family aren't. They're dark. And they certainly don't go around in war paint and wear the headdress and ride horses. I guess because I see how it impacts them, the stereotypes that people have about them, I don't agree that it's right. But it's very hard to explain it to people who don't understand it because they pretty much have their minds made up (S17).

It is appropriate to note here that this student did not comment as to whether or not her instructors led by example or declared a position on this widespread campus

discussion. That degree of relationship clearly did not exist between Program A students and their instructors.

Moreover, S1 said that she and another American Indian woman from the Program (they comprised the first class to enter Program A) were walking on campus one day when a man came up to them and spontaneously told them to go back to their country. They weren't sure if he was talking to them, or what "country" he thought was theirs. However, it was clear that these students had strong emotional and intellectual reactions to the incident. Again, S1 did not volunteer whether they encountered any professor concerned enough about a relationship with them to inquire whether they were subject to any such types of incidents.

SOCIALIZATION FACTORS: PERSONAL AND ACADEMIC

As shown in the Review of Literature, a student's socialization (both personal and academic) is one important factor when considering persistence through the educational process. These students went through the same orientation session as did all other students. There was no in-depth orientation designed uniquely for students in Program A. At the very beginning of the program, the new students were informally linked with current students so that they had someone they could go to for assistance (both personal and academic). Alumni also met with students in this professional program on a regular basis. Another source of socialization for American Indians was the American Indian Learning Resource Center. This Center provided them with information about resources available to them on campus and in the St. Paul-Minneapolis area. All of Program A students found comfort and stability within their own core group.

For this group, informal peer mentoring was a strong and necessary element to their socialization processes and, indeed, to a large degree to their survival in the Program as well. These American Indian women students many times felt isolated and "lost in the (University) system." Two of the three women interviewed

made attempts to socialize with other students. The third student preferred to stay by herself. She said, "That's basically just my choice. I don't think it has anything to do with them" (S17). She went on to say that the people who gave her the most helpful and informative facts about the program were the other Program A students who were already in the program. S17 said that being a female student of color at the University of Minnesota was "very, very scary." She went on to say,

> I try to be about as anonymous as I can in class. I do my work because that's what it is to me. It's just class....I don't think that a lot of people know that I'm Indian. They don't know unless I tell them....So generally I don't tell people. Some of these things aren't their business....I think that it's just that people aren't really willing to accept other people. Not yet. And that's just my own personal feeling (S17).

Again, compared to the other students, there are elements of withdrawal in these words, as opposed to tendencies toward the options of aggression or a change-agent role. And, again, the nature of relationships at the University, for her, was impacting her behavior.

The climate for these students, on the whole, was not friendly and welcoming, at least at first. One program administrator (A2) said that the students in Program A were well respected by the student body, but did not elaborate at length. She did go on to say, however, that they traditionally do not use the student lounge nor do they use the placement office. She said, "they use their own resources, in their own context" (A2). She also said that these students tended not to live in university housing. Instead, the majority live off-campus with others in the American Indian community. The other administrator agreed that these students "segregate themselves in some ways" (A3) but went on to say that some of the majority students "are *very* intolerant of anyone who has different values, different skin color, speaks a different language" (A3).

One administrator (A2) attempted to organize a "help group" for the students in Program A (both women and men). She soon found out, however, the extent of

these students' previous socialization and that these students preferred to work *within their own Indian community*, student-to-student, American Indian to American Indian. She was told that they already had a group that they started on their own with American Indian students in another professional school on campus and that they wanted to keep it a "self-group" and did not want anybody else working with it. The administrator agreed to stay out of it and did not probe for perceived causes of the students' views in the matter. However, she did assist them in setting up quarterly luncheon meetings with the Dean and two Associate Deans so that the students were given a vehicle through which to share problems and concerns with school administration. Clearly, she felt that the nature of their problems and concerns warranted the attention of the Deans' Office.

S1 said that it was difficult to make friendships and be a part of the student activities. She believed one reason for this difficulty was that she was older than most of the other students. However, she went on to say, "I'm one to get along fine anywhere in the world. I can talk to anybody and feel comfortable. But it was just not a friendly atmosphere....I think a lot of my classmates don't have a lot of experience with minorities and I think maybe they don't know how to approach me" (S1).

Interpersonal relationships with majority students, especially male students, tended to be stressful for these women. This was especially true in group situations. As S1 explained it:

> I'd find in groups of mostly Caucasian males, oftentimes they were vying for leadership. They wanted to be the spokesperson of the group. They wanted to be the one that's gonna represent us when we're interacting with the instructor. All those kinds of things. It was real important to them. So they were just kinda dictating different things, activities, to get our project going. And what I found worked best for me was to meet individually when I'd recognize this pattern. I would meet individually, show up early and spend some time one-on-one just talking about my background and getting to know them as well. So that somewhere they would recognize that I had something to contribute. But when we got in the total group, it was really hard for me to establish that credibility (S1).

Conspicuous due to its absence was voluntary commentary on the relationship of the professors to this phenomenon. S1 did not state the professors' positions on teamwork, the nature of relationships in study groups, structure or outreach to aid the study process.

The elective courses in a different college, however, afforded these women the opportunity to interact with other women in group situations. This experience was quite distinct from the one described above. Of this experience, S1 stated, "I felt like we were able to work as a team and have confidence and trust in each other....I felt like I was given more control when I worked with other females. They trusted that I would do my part and we could all contribute to the effort" (S1).

The women stated that there was some resentment voiced by some of the majority students in the "umbrella" program. Because Program A was new and unique in the nation, these students received a lot of publicity initially. The first two students, for example, were interviewed by *The New York Times*, and the *Minnesota Management Review* did a cover story on them. Obviously, these students were known to many of the other students. S1 said it was very sad that, "we never got any positive feedback from *anybody* who said, 'Hey, that's great! We're glad you're here!' You know, anything. Nothing!"

Regarding another element of socialization, one of the students (S19) stated that she enjoyed participating in a variety of activities offered by the American Indian community (e.g., pow wows and tribal meetings). There is a large American Indian community close to campus and she and her family were very active. She also stated that she knew 20–30 Indian people before she came to the Twin Cities area and said, "It does help a lot to know a few people" (S19). These comments confirm that a supportive relationship is essential to the student and many students seek it out, whether it is readily available or must be located elsewhere.

Focusing on academic socialization, the general consensus of these American Indian women students was that in Program A, there are good instructors at the

University of Minnesota and there are bad instructors, as elsewhere. One student (S1) chose to comment on this crucial difference by naming a few faculty in one department who were "more sensitized" to diversity and were, therefore, more supportive. She listed certain characteristics by stating, "They seemed to take a real sincere interest in what I was doing...interested in all of us...gave us all time....When we were comparing professors, we made the same conclusions" (S1).

When asked if there was any kind of a mentoring element to the program, both students and administrators agreed that any interactions that could be considered as mentoring went on between the alumni, the current students, the new students and the American Indians in the other professional program.

Informal peer mentoring was recognized by the administrators as well as the students themselves. It was seen as a daily activity, and students stated that it existed for purposes of survival. The first two students in the program were women and they were all alone. These women were described as strong individuals and good students; therefore, they were able to survive the experience very well. At the beginning of their experience in the Program, these two women "combined like a team" (S1) and depended upon and drew upon each other's strengths and experiences. When another American Indian woman joined the program the following year, she leaned on the other two women for support. They would meet regularly and share information about instructors, about classes, and what was going on. In their terms, the first year students would "pick the brains" of the second year students. They also discussed personal things and would let each other know about things that were going on around town that they might be interested in, including internships and job opportunities. As one student said, "We just usually talk about any and everything!" (S19).

One administrator (A3) stated that they currently did not provide any formal mentoring. He went on to say,

> My guess is that you would probably have some disagreement on exactly what *is* appropriate mentoring for an American Indian student. Do those students need to be mentored by American Indians? And if that's the case, who does that? We don't have any American Indian faculty nor American Indian administrators. We have no American Indians in the School outside (Program A). So, who mentors the (Program A) students? (A3)

When I asked one of the students about this she said:

> I would prefer to work with another female woman of color. Not particularly an American Indian, but I think we probably would share a lot of the same concerns....I feel like the bureaucracy at the university is so entrenched that to have somebody to talk to, that can relate to you, another person of color, another female, would help give you that emotional support. I think that was the most difficult for me, the emotional support (S1).

This student went on to describe what might be termed a courageous act. She shared that she had taken the initiative and contacted a male Native American professional at a large local company. She said that this person "opened the doors" for her at this corporation and supported her both on a professional and on a personal level.

She went on to say, however, that this male minority was "in the mainstream society and not understanding of a lot of things that I'm talking to him about. He doesn't seem to be real sensitive about female concerns. He's...got a different attitude about women in management" (S1). She said that even though he was a tremendous support, "there are certain things I can't talk to him about" (S1). When asked if it would be an option for her to have a female non-minority mentor, she said, "There're possibilities there" (S1).

When asked if these students had any mentors among the faculty, both students and administrators alike said that they did not. These students did not feel any sort of connection with the faculty. As a matter of fact, this was one of their major concerns. They felt that faculty have very little interest in getting to know them as individuals and in getting to know their culture. All the students interviewed felt that the faculty took virtually no interest in them. They also stated

that there was a definite lack of cultural sensitivity amongst many of the faculty in this School at the University.

In the inverse, one meaningful set of data derived from Program A interviewees' perceptions provides foundations for establishing what a Quality Mentoring Model is not. There is value, therefore, in examining the facets and features of these interviewees' concerns because these are elements of relationship the QMM dynamic seeks to deliberately and directly address.

RESPONDENTS' OVERALL EVALUATIONS OF PROGRAM

The two American Indian women comprising the first class were seen as "groundbreakers." They experienced more overt racism and criticism from others in the program. Women students entering the program after 1990 had it a bit easier because the first students had, to an extent, laid the foundation for those who followed. The first two women said that their classmates did not have a lot of experience with minorities but the following years' classes had many more minority students in them. Therefore, whereas the first students experienced racism, S19, who entered the program later on, said that students in most of her classes wouldn't think of saying anything racist. She was of the opinion that "the more minorities we recruit, the more it's (the campus climate) going to improve" (S19).

Administrator A2 said that, in general, she was very pleased with Program A. The other administrator (A3) said that one of the real difficulties and challenges they face in the school and at the University "is truly *valuing* diversity, not just accepting it or putting up with it or meeting the letter of the law, but actually *valuing* and *truly believing* that there is value in diversity" (A3). He went on to say,

> I've believed right from the very beginning that not only was this a great thing from a PR (public relations) point of view, but it was the right thing to do. We were presented with an opportunity, we responded to that opportunity and we have pursued it aggressively

> and in good faith....We're beginning to deliver people out there and we have a chance to make a difference (A3).

A3 also said, "What we have unwittingly done, by having (Program A) here is to open up these students to all of that intolerance in the dominant culture in a rather structured way here...." (A3). He also said that faculty and students alike have demonstrated a real lack of sensitivity to these students and what their reality was, both in the classroom and outside the classroom.

A3 is hopeful that the presence of these students, over time, "may help the student body as a whole to confront their own bigotry and their own racism, which I think is so pervasive in our society and here in Minnesota it's easy to ignore it because we're so overwhelmingly White" (A3).

The students remarked that they felt the program was "relevant," "really good," and that "it's working." S17 said that she felt the Program

> is following the right idea, but I know it's hard for me to be here....I think there's been a lot of lip service given to diversity here, to appreciate difference, that it's the future. I honestly don't believe that that's what people want. I think they want to want it. But we're all different and they have a really hard time accepting anyone who's different....I just don't see that they're very sincere in their efforts (S17).

Several suggestions for program improvement were made. One student remarked that she thought "a lot of people would benefit from doing a field project for a tribe for a quarter. I think it would maybe open their eyes" (A17). Another of the students (S19) said that they had been talking with the Dean about getting more tribes involved in the internship program.

Lack of communication was another problem seen by these students. Having more information available to the students was seen as a necessity. Such things as cost of living expenses were unknown to the students until they actually were on campus. The students agreed that the university is intimidating and that the American Indian Resource Center was of great assistance to them. But they said

additional support should be made available because the Center was already stretched to capacity.

Also regarding more communications, one student (S19) said that students in general did not know what activities were going on and that they would find out only "after the fact." She suggested "getting that information through the *entire operation* so everybody knows that they're going to be doing something" (S19). She also suggested that "there needs to be a *different* kind of social activity" (other than Friday beer bashes, for instance) because a lot of people are married, a lot of people have children, and they'd like to have something that's more conducive to bringing the family into the situation" (S19).

Another concern these students expressed was in regards to the School's diversity initiative. One student said that, "We feel as though the (school's) diversity initiative...is not defined as American minorities. We feel like they're concentrating on getting Asian students--more internationally-based than American students....Recruitment efforts should be directed toward more American minorities" (S1).

PROGRAM A AND THE QUALITY MENTORING MODEL (QMM)

Program A does not have a formalized mentoring program. It is clear from the interviews with these women participants in Program A that not only did they not have faculty mentors, they felt that faculty had no interest in getting to know them nor learning about their culture.

When asked about expectations of the program, and especially about how those expectations related to mentoring, one student stated that she was a bit uneasy about the large size of the University of Minnesota (40,000 students and 30,000 staff and faculty). She said that she "had this fear of being lost in that system and not getting a whole lot of personalized attention. I graduated from a

private college so I did receive a lot of individual attention there. So I was kinda worried about that" (S1).

To overcome this fear, the first two women met and combined as a team. Both agreed that it was helpful to have another woman American Indian student in the Program. Over the next two years, three more women entered the program. All these students were pretty much on their own. Any mentoring that occurred was peer mentoring. The entering women students relied on the second year students for support. They shared information about instructors, particular classes and size of classes, the weather, and how many people were in the program.

S19 stated that she expected that there would be mentors available in this program. She said, "That's my idea of how graduate school worked--that there were mentors who were available as advisors." She went on to say, however, "It just isn't happening that way." All of these students said mentoring would be a positive addition to the program.

Case Study #1 demonstrates that even where there is no formalized mentoring program in place, those individuals involved will see the need and fill that need through their own means. In this case, the students fulfilled their needs to the extent they could through informal peer mentoring. A feeling of comraderie with peers was strong. This peer mentoring was acknowledged by both the administrators and the students themselves and was recognized as an important survival tactic.

At the time of the interview, one of the administrators (A3) mentioned that the larger, "umbrella" professional program was in the process of designing a mentoring program for students and professionals in the community. This would involve professionals in the community who would be mentors to a group of students. This would not be one-on-one, but rather would be a small group, probably no more than three or four students per mentor. As A3 visualized it at that time, the mentor approach could be part of the first year of the program. He

thought the mentor and proteges would meet on a monthly basis. In a personal communication with one of the Associate Deans of this school, she said, "For professional students, mentoring by executives is deemed more important than by faculty" (Mary Nichols, personal communication).

A3 said the reasons for a mentor program included providing the students with a role model and giving them a glimpse into the professional life of a person who had attained a broad level of responsibility. It would also give students an opportunity to interact with an executive in a professional setting whom they could get to know and talk to about career progression and what it's like to be an executive. The mentors would be expected to invite the proteges into his or her professional setting. The mentor would introduce their protege(s) to other people in that setting and help them to learn about the organization. A3 was referring to organizations in and predominantly of the majority culture.

Administrator A3 said that the program would solicit the participation of the mentors and the students. Enough information would be developed about their interests and their desires to make a reasonable match. They would set up the initial interactions, offer some training (explaining to everybody at the same time what the expectations were, offer some guidelines for the relationship) and then "just let it happen as it happens" (A3). Certainly, there are considerable ramifications to the structural and organizational perspectives inherent in this suggestion.

Relevant to that comment is the fact that because of the nature of this professional program, mentoring by executives is considered by some to be more important (e.g., for learning organizational socialization skills) than is mentoring by faculty. Moreover, because participants in Program A were required to return to their tribes, at least for the one-year commitment, and did not expect to become involved in corporate America at large, they preferred to support each other through peer mentoring. Quality mentoring, or even traditional mentoring, was not

present at the time of the interviews and with the proposed structure in mind, may not have been present subsequently.

As illustrated by this research, mentoring in recent history had its foundation in the business world. As the literature review revealed, mentoring in the business world is highly valued and it is common practice for mentoring to be utilized as an important means of socializing individuals into an organization. It is also used as a career development tool. From that perspective, and viewing certain limited goals, the experience the School's proposed "corporate" mentoring program will provide to participants appears to be a good first step toward introducing students in a hands-on, formalized fashion into the world of business.

It is this researcher's opinion that the "corporate" mentoring program for the parent program could lead to more in-depth relationships and even to quality mentoring where there is a more sophisticated and deeper reciprocal relationship between mentor and protege involving deliberate cultural issues on a personal level. Such in-depth relationships reap the rewards as well as bear responsibility for the success of the relationship. But for participants in Program A, because of the students' culture, personal preference, as well as the innate nature and goals of the program as described in this chapter, circumstances would not permit quality mentoring to develop and flourish.

One final note. In follow-up conversations with both administrators of Program A, it was learned that the Washington, D.C.-based Indian organization has decided to provide funding to American Indians in a more direct manner (e.g., community support). Therefore, Program A has been disbanded and the last student graduated in June 1995.

CHAPTER V

CASE STUDY #2: PROGRAM B
UNDERGRADUATE PROGRAM IN BIOLOGICAL SCIENCES

DESCRIPTION OF THE PROGRAM

Program B is an undergraduate intensive summer workshop in biological sciences for populations underrepresented at the University of Minnesota as well as within the specific scientific disciplines (ethnic minorities and females). The Program began in 1989. Designed to increase the numbers of women and ethnic minority students planning and preparing for graduate programs in biological sciences, students come from all parts of the United States for ten weeks of independent research in the laboratories of faculty mentors. Numerous faculty in a wide variety of disciplines including the Medical School and the Colleges of Agriculture, Biological Sciences, Natural Resources, Pharmacy, and Veterinary Medicine, serve specifically as mentors for underrepresented undergraduate students who want to do independent research in these fields.

In the sciences, the mentor-protege (or master-apprentice) relationship is conventional and is generally seen as one of the most effective vehicles utilized for the process whereby a lesser experienced person learns the techniques of the discipline from a more seasoned and experienced practitioner. Indeed, the College of Biological Sciences at the University of Minnesota, the site of Program B, expects their faculty not only to carry out mentoring activities but considers mentoring as a major element of a faculty's workload. This College's Workload Statement reads:

> A major component of the teaching load of many faculty is the mentoring of undergraduate, graduate and postdoctoral students in the conduct of research. While mentoring is an expensive teaching method, it is the only proven method of teaching students how to conduct modern research. Mentoring occupies a significant amount of the teaching time of faculty; it should be equivalent to one or more courses per term for research-active faculty.

Therefore, in this research study it was anticipated and expected that in Program B, formalized mentoring would be planned and students paired with faculty in various science disciplines. This was the case; but, as will be seen in this case study, the types, depth, and levels of mentoring described by both students and faculty mentors varied greatly. Figure 9 on the following page is a summary for Program B.

The primary objective of Program B is to provide a challenging and enriching educational experience for outstanding undergraduate students. The students spend ten weeks doing full-time research. It is hoped their experience will be useful and thereby will strengthen their interest in and preparation for graduate or professional education and research or teaching in the biological sciences. The summer program links

> each student with a faculty member who has an active program of research in biological science and has been specifically chosen to be a student mentor. Faculty are selected on the basis of their interest or previous successful participation in the undergraduate research programs, their commitment to working with talented undergraduates, and the appropriateness of their research for an undergraduate program. Student participants will be involved in four types of research-relatedactivities: 1) assisting a faculty member on his/her current research, including opportunities to work as a member of a research team; 2) completing an independent research project under the direction of the same faculty member; 3) participating in a weekly seminar; and 4) preparing a research project summary in the form of a display for a poster session. The program includes opportunities for students to learn specific research methods, to apply these methods in the context of their own research, and to develop skills in communicating their research activities and results (*1992 Summer Programs in Life Sciences Student Handbook*, University of Minnesota, page 1).

According to the administrator of Program B, this summer research laboratory experience "gives the students an opportunity to feel the excitement and the power of learning something totally new and different and making some discovery that's all theirs, that nobody else in the world has ever done before....They also learn a tremendous amount about how research is done and what it's like to be a research scientist" (A1).

FIGURE 9

Program B

PROGRAM B

- UNDERGRADUATE - SCIENCE
- ESTABLISHED IN 1989
- ALL MINORITIES
- GIVES COLLEGE JUNIORS AND SENIORS HANDS-ON TRAINING IN A LAB SETTING DURING SUMMER PROGRAM

  WITH THE HELP OF A MENTOR, THEY EXPERIENCE WHAT THEY WOULD ENCOUNTER IN GRADUATE, MEDICAL, OR VETERINARY SCHOOL. BOTH MINORITY STUDENTS AND FACULTY ARE GREATLY UNDERREPRESENTED IN THIS FIELD

When describing the recruiting process, A1 said that the administration and faculty put a real emphasis on recruiting more students of color and that those students they accept for participation in the program are "equally well qualified, if not better" (A1). Students of color had to meet the same admission requirements as everyone else. As is evidenced in all three case studies, this was a theme that was true for the programs investigated during the research for this dissertation.

A1 said that approximately 3,000 notices are sent each year to prospective students. Recruiting targets historically Black colleges, colleges with high minority enrollments, a number of scientific societies that draw heavy participation by persons of color, and Program B administrators looked specifically for places where they would find biology students (e.g., National Institutes of Health's Minority Access to Research Careers (MARC) and the Minority Biomedical Research Scholars (MBRS) program). The Program has lists of the mentors working in the two latter programs and they send their materials to them encouraging them to ask their students to apply to the Minnesota program.

In order to apply, prospective students need to document that they are going to be good potential candidates for graduate school. They have to have respectable grades in the sciences. In this regard, A1 said that grade point averages (GPAs) for at least half the undergraduate students applying to Program B for summer 1992 were 3.5 or above. Prospective students also need two faculty letters of recommendation that affirm the student is sincerely interested in science, that they will work hard, and that they will benefit from this program. Each student also must submit a statement of purpose that shows they have given serious thought to going on to graduate studies.

When prospective students submit materials, they are put on a list that is sent to interested faculty mentors. When a faculty mentor sees a student on the list that (s)he is interested in, they call the administrative office to request that student's application materials. The mentor makes the decision as to whether or not

the student appears to be an individual who would be appropriate to work in his/her laboratory and if, after seeing the student's materials, the faculty mentor is willing to accept the student as a protege, (s)he notifies A1's office. This comprises the steps of the procedure for pairing the prospective student with a faculty mentor who is conducting research in an area of interest to the student and a student who has academic credentials that are of interest to the faculty mentor.

A1 emphasized that most of the faculty are on nine-month appointments; hence, they are taking on these students as an extra load in the summertime. It is a gesture on their part indicating they want to support the student. Therefore, in return, they want a student who is serious and interested. In reality, as evidenced in this case study, many times these undergraduates work to make unique contributions via their research that is of direct benefit to the specialty area of the mentor.

Each student is paid $250.00 per week for ten weeks for a total of $2,500 for the summer. The most common way of acquiring funding has been to divide it three ways: one-third could come from the Dean's Office, another third could come from the faculty mentor's research grant, and the last third could come from one of the institutional grants (administered by A1).

DEMOGRAPHICS OF STUDENT RESPONDENTS

Of the 21 ethnic minority undergraduate women students in Program B during summer 1992, 13 were interviewed (62 percent). During the same time period, 13 mentors were interviewed as well as the administrator of Program B. This researcher attempted to interview as many mentor-protege "pairs" as possible. Eight "pairs" (62 percent) were interviewed. Five proteges without their mentors and five mentors who had proteges other than those women interviewed were also interviewed. The following section gives a brief demographic summary for each of

the women undergraduate students participating in Program B and interviewed for this project. These data are summarized in Table 7 at the end of this section.

Nine African American women, two Puerto Rican women, one Native American woman, and one Mexican American woman were interviewed. The group total was deemed a representative sample relative to the overall ethic composition of the undergraduate women students in Program B during the Summer of 1992.

S2 is a local resident Mexican American woman who at the time of the interview, was an undergraduate student in biology at the University of Minnesota. Her mother is a Mexican American with a bachelor's degree in fine arts. Her father is a Caucasian with a master's degree in international business. At the time of the interview, S2 had a sister who had obtained a Master of Fine Arts (MFA), another sister who had a bachelor's degree and was working on a master's degree, and a brother who entered a bachelor's degree program in fall 1992. At the time of the interview, S2 stated that she planned to go on to obtain a degree in Veterinary Medicine. During the 1995 process of conducting follow-up research on student interviewees in Program B, it was found that S2 had graduated in 1994 with a B.S. in biology and entered Veterinary Medicine at the University of Minnesota in fall 1994. S2's mentor was M9.

S3 is a Minnesota resident of Puerto Rican descent who received a B.S. in chemistry in 1992 from a Minnesota private college. She participated in Program B in both 1991 and 1992. Both of her parents are Puerto Rican. Her mother received a bachelor's degree in home economics. Her father received a J.D. (Law). One brother received a B.S. in biology and a second brother received a B.A. in psychology and a J.D. At the time of the interview, S3 stated that she wanted to become a doctor. The 1995 research found that S3 entered the University of Pennsylvania Medical School in 1992. It was not possible to interview S3's mentor.

S4 is a Puerto Rican citizen who received a B.S. in industrial microbiology from a Puerto Rican university in 1994. Both parents are Puerto Rican. S4's mother

received a high school education. Her father received a bachelor's degree, as did her two brothers. S4 stated in the interview that her priority for a career was research. The 1995 follow-up research documented that she entered a Ph.D. program in microbiology at Michigan State University in 1994. S4's mentor was M7.

S5 is an African American woman from Maryland who received a B.S. in zoology from Howard University, an Historically Black College (HBCU institution), in 1993. Both her African American parents are retired. Neither of her parents received a college degree. Her sister received a nursing degree in 1991. The 1995 follow-up research showed that S5 entered the M.D. program (physiology) at Howard University in 1993. S5's mentor was M11.

S6 is an African American Minnesota resident who received her B.S. in psychology in 1993 from The University of Iowa. Both her African American parents received degrees in education. Her mother received a B.A. in art education and her father received bachelor's and master's degrees in educational administration. Follow-up research indicated S6 entered a master's program in clinical psychology at George Washington University in 1993. S6's mentor was M12.

S7 is a local Native American who was only 18 years old at the time of the interview (summer between her freshman and sophomore years). Follow-up research found that in 1995 S7 was still enrolled at Stanford University and expected to receive her bachelor's degree in human biology late that year. Both of her Native American parents had received bachelor's degrees from the same local Minnesota private college and Master's in Social Work (MSW) degrees from the University of Minnesota. In 1992, S7 stated that her father was currently enrolled in a Ph.D. program at the University of Minnesota. S7 stated at the time of the interview that she intended to attend medical school to become a practicing physician. During the follow-up research in late December 1995, it was determined that S7 planned to apply to medical schools in Spring 1996. It was not possible to interview S7's mentor at the time of the original field research.

S8 is an African American Illinois resident who was enrolled for one year (1988-89) at Western Illinois University, then enrolled in the bachelor's program in microbiology at Chicago State University and graduated in 1994. S8 is a first generation college student. Both of her parents received high school diplomas but did not pursue higher education. S8's mentor could not be interviewed.

S9 is an African American woman from Illinois who received a bachelor's degree in microbiology from the University of Illinois, Urbana-Champaign, in 1993. Both her parents are African American. Her mother has a master's degree in school administration and her father has a Ph.D. (field unknown). December 1995 research determined S9 had not enrolled in a graduate program but was employed as a medical technologist in hematology at the University of Chicago and hoped to become a forensic scientist. S9's mentor could not be interviewed.

S10 is an African American from North Carolina who received a bachelor's degree in biochemistry and chemistry from North Carolina State University in 1993. Her mother (an African American single parent) received a bachelor's degree in education. The 1995 follow-up research determined S10 enrolled in the medical school at the University of North Carolina, Chapel Hill, in 1993 to pursue a M.D. degree. S10's mentor was M3.

S11 is an African American resident of Arkansas who received her bachelor's degree in biology from the University of Arkansas at Pine Bluff in 1994. Her African American mother received a master's degree in elementary education and her father received a Ph.D. in educational administration. The 1995 research indicated S11 entered the University of Arkansas for Medical Sciences in 1994 in pursuit of the M.D. degree. S11's mentor was M2.

S12 is an African American Minnesota resident who received a bachelor's degree in biology from the University of Minnesota in 1994. Her parents are both African American. Her mother received a bachelor's degree in education and her father attended the University of Michigan but it is not known if he completed his

degree requirements. The follow-up research documented S12 entered medical school at Northwestern University in 1994 in pursuit of the M.D. degree. S12's mentor was M4.

S13 is an African American and American Indian Louisiana resident who attended Grambling State University (biology/premed) beginning in 1989. According to research records, she last enrolled in Spring 1993 and her undergraduate degree had not as yet been achieved. During research done in October 1995, it was discovered she was working and going to school in Houston, Texas. Each of S13's parents are of African American and American Indian descent. Her mother received a high school diploma and her father attended junior college. The demographic data obtained at the time of her interview indicated that her seven brothers and four sisters completed college degrees. S13's mentor was M6.

S14 is a Minnesota resident African American who received her bachelor's degree in microbiology from the University of Minnesota in 1992. Both her parents are Cameroonian nationals. Her mother has a B.S. and M.S. in nursing and her father has a degree in veterinary medicine and is a practicing veterinarian. At the time of the interview, S14 had a brother and sister attending college. The 1995 research determined that S14 entered medical school at the University of Minnesota in 1993. S14's mentor could not be interviewed.

The following table summarizes the above information. Data sources are Program B's alumni information records and this interviewer's student demographic research documents.

TABLE 7

Summary of Longitudinal Student Demographic Information
(June 1992-December 1995)

Student Code	Ethnic Background	State of Residence	Pursued Graduate Degree? Where?	Degree Sought	Mentor Code
S2	M.A.	MN	Yes, U of MN	D.V.M.	M9
S3	P.R.	P.R.	Yes, U of PA	M.D.	N/A
S4	P.R.	P.R.	Yes, MI State	Ph.D.	M7
S5	A.A.	MD	Yes, Howard U	M.D.	M11
S6	A.A.	MN	Yes, Geo. Wash.	M.A.	M12
S7	N.A.	MN	No	--	N/A
S8	A.A.	IL	Unknown	--	N/A
S9	A.A.	IL	No	--	N/A
S10	A.A.	NC	Yes, U of NC	M.D.	M3
S11	A.A.	AR	Yes, U of AR	M.D.	M2
S12	A.A.	MN	Yes, NW	M.D.	M4
S13	A.A.	LA	No	--	M6
S14	A.A.	MN	Yes, U of MN	M.D.	N/A

Summary Statistics:

13 of 21 women students of color (62 percent) were interviewed.
8 of 13 "pairs" (mentor-protege) were interviewed (62 percent).
9 of 13 interviewees (69 percent) went on to graduate studies (graduate school, medical school, veterinary school).

SOCIALIZATION FACTORS: PERSONAL AND ACADEMIC

Program B provided the summer students with a variety of activities, both academic as well as social activities that were "just for fun." Academically, the students were expected to attend weekly seminars and complete an independent research project under the direction of his/her faculty mentor and/or other laboratory personnel such as graduate students and postdocs. In addition, they were to present the research project summary at an all-participant gathering described as the "poster session" at the end of the summer experience.

At times, persons from outside the Program would come and talk to the students about topics of interest. One example was the presentation by individuals from the Graduate School describing the process of preparation for the GRE and application for graduate school. An all-participant banquet at the end of the program was also part of the planned activities.

Social activities were optional, but encouraged. These activities were essentially Minneapolis-based weekend activities and fell into three main categories: 1) recreation on lakes and rivers; 2) Twin Cities Area attractions; and 3) sports/physical exercise. The activities offered under the first category included: 1) trip to Duluth and North Shore (popular summer vacation spots in Northern Minnesota); 2) tubing on the Apple River (a recreation area in nearby Wisconsin); 3) canoeing on the St.Croix River (approximately a one-hour drive from the Twin Cities); 4) canoeing on Twin Cities lakes; 5) canoeing on the Boundary Waters (there are a number of recreational areas on the Minnesota-Canada border); 6) wind surfing on Twin Cities lakes; and, 7) swimming at Twin Cities beaches.

Activities the summer students in Program B could participate in from the second category included tours and day excursions to: 1) Walker Art Center/Sculpture Garden; 2) Bell Museum of Natural History; 3) Valley Fair Amusement Park; 4) Guthrie Theater; 5) Minneapolis Institute of Art; 6) Science Museum of Minnesota; 7) Minnesota Zoo; 8) Minnesota Twins baseball game; and 9)

other Twin Cities theaters. Additionally, the students could also partake in a number of physical activities including rollerblading, biking, tennis, volleyball, softball, golf, and dancing.

Participation by the students interviewed ranged from S12 attending only four of the social activities; to S3, S11, and S14 participating in 8 activities; to S8 participating in everything except for softball, golf, and dancing. The other students' participation fell between 4 and 20 activities. No student rejected all participation.

Students' remarks regarding the planned social activities were essentially positive in nature. Some students thought there should be more social interaction (especially with the group as a whole), while others thought there should be fewer social activities. One mentor (M12) commented that there was too much emphasis on the social activities. She said her protege (S6) was very shy and she did not want to participate. M12 felt that S6 "was just being pressured, pressured, pressured ...and she just didn't want to" (M12). M12 went on to say

> The main focus (of the program) should be on the research and not make the student feel that somehow they're not holding up their share if they don't go to these social activities....It's nice if they want to do it and it's nice to have it available but I don't feel that a student should be pressured into it. That's not the focus of the program (M12).

This is an example of mentor "defending" behavior, and provides one testimony of mentor dynamics treated in the Quality Mentoring Model (QMM) discussion.

On the other hand, it is important to point out that the majority of mentors stressed the "social" atmosphere within their laboratories. They deliberately promoted interaction and intermingling among the undergraduate summer students, the graduate students, postdocs, lab technicians, and other lab personnel. The majority of the mentors felt this was a very important part of the undergraduate's summer laboratory experience. Through this "hands-on," day-to-day interaction, the students learned how a laboratory operated and how the people within those

laboratories cooperated and socialized, whether it be over lunch or over a test tube.

Two of the students interviewed (S8 and S9) worked in laboratories at a local affiliated hospital approximately 30-45 minutes from campus. A total of four students from Program B worked there and because they drove back and forth between campus and the hospital on a daily basis, they formed their own "social group." They ate lunch together, socialized on weekends, and would sometimes go out to dinner together. Because travel time to the work site made it difficult to attend the noon seminars on campus, they formed their own seminar group in which they discussed their particular projects. They showed initiative and invited speakers to come to talk with them.

S6 was the only minority person working on her project in M12's laboratory. During the course of the interview, she provided information helpful to understanding her mentor's aforementioned defending behaviors. S6 said she pretty much kept to herself and didn't "want to get into doing a lot of things" because of her experience at her undergraduate institution. She said,

> I've become more suspicious....I've just become aware that there are a lot of stereotypes, mostly negative, about women and Blacks that are internalized. I'm sick of having to educate...them constantly.

S6 further stated during the interview that her particular discipline was primarily populated by White, Anglo Saxon males. When asked if she, as a female of color, thought her gender and ethnic background would have a negative impact on her future career goals, she said,

> No. It actually enhances my goals because I'm so motivated to become a force in that I'd like to conduct both research and counseling at the same time. So I think that I'm more focused because I think that with a lot of the changes that are going on in our world--where a lot of women of color can get really pushed to the bottom--there's no one to really hear what they have to say so I feel more motivated. I guess I'm rather shocked coming here because this is definitely a metropolitan area and...I've only seen two people of color in clinical psych that are actually students. No faculty....I probably won't come here for graduate school (S6).

DEMOGRAPHICS OF FACULTY MENTOR RESPONDENTS AND FACULTY VIEWS OF MENTOR PROCESS

A total of 13 faculty mentors (10 male and 3 female) who participated in Program B were interviewed during the summer and fall of 1992 and the winter of 1993. Eight of the 13 faculty were mentors to those women minority undergraduate students interviewed for this project. The following provides descriptive data for the 13 Program B faculty mentors who were interviewed.

M1 is a professor of biochemistry and at the time of the interview had been at the University of Minnesota for approximately three years. M1 was not a mentor to one of the undergraduate students interviewed for this study, but was experienced with all of the features of the process in the current setting.

M1 said that he had participated in summer programs at his previous institution as well and enjoyed doing it. Relative to the science laboratory setting he exclaimed, "I think it's good to have undergraduates around--I really do!" Even though M1 made this declaration, he also stated that

> they are a disadvantage for four weeks or so at the very beginning. They're a real burden on whomever is guiding them. There are a thousand things you have to know in the lab and oftentimes it takes longer to teach them than it would take you to do it yourself (M1).

On the other hand, he said that one advantage of his laboratory situation was the opportunity to interact with a number of "people who are different" (e.g., ethnic backgrounds, educational experiences, gender). He said that this kind of situation offered everyone the opportunity to learn many things from each other on a daily basis--"whether it be talk about science or other things." He summed up this part of the interview by stating, "One of the main reasons I enjoy participating is because it brings in somebody different, even though it's for a short time." He also said that he planned to be a mentor again, on a regular basis, in Program B, even though he was not able to participate more fully that particular summer.

M2 is an Associate Professor of Food Science and Nutrition and at the time of the interview had been at the University of Minnesota for five years. M2 was the mentor for S11.

When asked why she participated in Program B, she said,

> Politically, it's the thing to do but that's not the reason. The president's got a campaign for diversity but I think I would have done it anyway. It happens to be something I'm interested in and believe in so I guess that's more to the point than anything the president would do or say or any university policy. And I think I've been pleasantly surprised by these students (M2).

When asked if being a female mentor for a female student of color was beneficial to the student she said, "Absolutely!" She said S11 told her that she considered her a role model (even though M2 is not a person of color), and that she was happy to have a female mentor.

M2 stated that she is committed to seeing that "every student is given a chance to prove their worth....All that I would ask is that they have a chance and this program gives them a chance." According to M2, the benefits of the program are many. By her comments, M2 places values on certain facets of the mentoring process. For example, she takes pleasure in knowing that she is helping a young person develop. She said, "I'd put these kids up against any of our students. Maybe they don't have the social background, but intellectually, I don't see any difference." She went on to say that because of their "social disadvantages" these students require a lot more mentoring. But, she continued, "if you give them that extra mentoring to get them back up to where everybody else is...I'd stack them up against any of our other students." M2's "nurturing" attitude toward her proteges is, in fact, an excellent example of precisely what Erikson meant by the term "generativity" as explained earlier in this dissertation.

M2 said that to her "mentoring is much more important actually than what they do for their research." She said she definitely will continue as a mentor for Program B.

M3 is an Assistant Professor of Pharmacology and at the time of the interview had been at the University of Minnesota for three years. M3 was the mentor for S10. M3 provided funding for S10 through a NIH grant designed specifically for minority students. S10 was, in essence, M3's summer employee.

M3 made a special effort to design a "very defined project for her that could be completed in the eight weeks but for which she would learn as many techniques as possible." She went on to say that S10 "may actually become a co-author on a paper."

M4 is an Associate Professor of Laboratory Medicine and Pathology and in 1992 had been at the University of Minnesota for approximately 4 years. M4 was the mentor for S12. The in-depth interview provided information that S12 was actually hired for a year-round position in M4's laboratory and worked part-time during her undergraduate studies. M4 said that S12 had first come to his laboratory in the high school program (another program in Biological Sciences that promotes the sciences to young people). S12 went to an undergraduate college on the east coast for her freshman year but returned to Minnesota in her sophomore year. She participated in Program B's summer program the preceding year as well as 1992 and continued to work in M4's laboratory, having started work there in 1991.

This mentor-protege relationship was unique in other ways as well. The research discovered that not only was M4's participation in Program B a direct result of S12's application to the program initially in 1991, but in addition she had actually enlisted M4 as someone with whom she wanted to work. S12 had acted on these options herself.

When asked if he knew if S12 planned to go on to graduate school, M4 said,

> I certainly hope so! Absolutely! I would encourage her to do that. Then I will consider the loop closed. Right now we're on the beneficiary side because she's helping in the laboratory and she brings excitement to what she does. It helps us to continue to be excited. It's a very positive experience.

This statement is a good example of the reciprocal nature of quality mentoring and illustrates a foundation principle of the Quality Mentoring Model. Namely, this mentor considers S12 to be an asset to his laboratory, he knows and is supportive of her future plans, and is concerned with her as a "whole person." M4 extended the effort to learn a great deal about S12, and has clearly exceeded the role responsibilities of the typical "advisor."

M5 is an Assistant Professor of Cell Biology and Neurological Anatomy and at the time of the interview had been at the University of Minnesota for three years. M5 was the only ethnic minority faculty member interviewed for this research project. M5 was not a mentor to a student from Program B interviewed by this researcher.

When talking about Program B, M5 made an interesting observation. He said, "the majority of applicants that get accepted are those that already have high grades, high test scores and they have a high chance of succeeding....There should be some way to reach other students" (M5). Later in the interview he reiterated that he would like Program B to "occasionally let a few students go ahead on promise." When asked if he would be willing to "take a chance" with such a student, he said, "Probably, but not every year. It's a major commitment...for a faculty member to have someone in their lab" (M5).

M5 said that he would probably be a mentor again in Program B but said,

> there've been no benefits at all. It's more work on my part and my technicians than it's worth. No data comes out. It's just too short a period of time and there are usually mistakes so most things get thrown out....That's why laboratory members are only interested if somebody's coming to them with some experience and they can train quickly--or forget about it.

There is evidence in the research interview to describe more fully some of the causes for M5's views. For example, he went on to say that he would rather see the efforts directed at students of color who are already in graduate education at the University of Minnesota. He emphasized that "a lot of graduate students of color

that I've talked with won't recommend this school to others because of the so-called 'climate'....When they come, a lot of them are dissatisfied....It's not a realistic place to be....It's not home" (M5).

M6 is an Associate Professor of Animal Science and stated that he had been a faculty mentor for four out of the five years he had been at the University of Minnesota. M6 was the mentor to S13.

In the course of the interview, it was discovered that M6 took the initiative and contacted S13 about the program. He said that the contact was a deciding factor in S13's decision to come to the University of Minnesota. S13 had four or five options to go to other schools but none of the other schools had a "mentor contact." M6 was the only one to contact her personally. It was this personal touch that made her decide to come to Minnesota. Again, the mentoring process is personalized initiative and investment of time and relationship effort.

M7 is a Professor of Microbiology who had been a long-time (approximately 30 years) University of Minnesota faculty member. M7 was the mentor for S4. This was the second year he had participated in Program B.

M7 determined the project S4 worked on. He said it was important to give her a project that was "do-able" in the two months she had to work on it, but yet make it enough of a challenge so that she would not become bored with it. He said that it was also important for the student to feel a sense of accomplishment with the project. He said that the project went very well and that S4 actually accomplished a "very great deal." As a matter of fact, she learned how to do a very complicated experiment and, with the help of the postdoc student who helped design the experiment for her, S4 actually did the experiment and her part of the experiment was "something we hadn't done here."

M8 is a Professor of Biochemistry and Director of Graduates Studies for the college. He had been a faculty member at the University of Minnesota for 25 years. M8 was not a mentor to the students interviewed for this project.

Even though M8 felt the program was "too expensive" in terms of time and commitment of the faculty mentor (see "Faculty Mentor Responsibilities" below), he said that the program gave him the

> personal satisfaction of having significant one-on-one interaction with a student. Students who come into this kind of program are usually eager to learn this kind of material and they're pleasant to work with. They usually pick it up fairly well, they're excited by it, and it's an opportunity to sort of show them how "things really happen" as opposed to reading about it in a textbook (M8).

M9 is an Associate Professor of Vet Pathology and Biology and was the mentor for S2. At the time of the interview, M9 had been at the University of Minnesota for seven years and had been participating in Program B for "the previous three to four years" (M9).

M9 said that S2 was an undergraduate at the University of Minnesota and was applying to vet school. This mentor stated that at the time of the interview, S2 was only one quarter away from graduation. That meant she would be working in M9's lab for a year before she entered vet school. Obviously, to M9, S2 was not just in a "summer program."

M10 is an Associate Professor of Pediatrics and had been at the University of Minnesota for 1-1/2 years at the time of the interview. M10 was not a mentor to any of the students interviewed for this project but stated that this was his second summer participating in Program B. He said he planned to participate as a mentor in the future as well.

M10 said he felt it was very important that a student in Program B not be given something that was already being done in the lab. It is important that they do "something they can call their own" (M10).

When asked what benefits he saw for participating in Program B, M10 said (in true Eriksonian "generativity" terms),

> You get rewarded on several planes. Just on a personal plane, it's always nice to work with somebody you can see will improve over time.

> You see that with your kids and you see that with people that you teach. It's just a pleasure to see people grow.

Another benefit to the mentor M10 mentioned that corresponds directly with significant facets of the Quality Mentoring Model is that these students oftentimes offered fresh ideas and posed some very good questions. He explained it in this manner:

> It's always interesting that people who are not well versed in the field, like undergraduates, often come up with some of the more interesting questions. You get so engrained in your thinking, tend to believe that everything that you've done is correct. It gives you a little start if somebody gives you something "out of left field" that makes you think and look at something in a completely different way! (M10).

M11 is an Assistant Professor of Laboratory Medicine and Pathology and had been at the University of Minnesota since 1990. M11 was the mentor to S5 and had participated in Program B since he came to Minnesota. M11 contacted S5 before she came to Minnesota and she had asked him to send her some reading materials to prepare her for her summer experience. M11 said that after reading the materials, S5 actually called him back and proposed a project that was "created distinct from the routine things that we do in the laboratory...something that could be very important" (M11). He considered S5 to "be an extraordinary talent."

S5's behaviors provide an excellent example of the foundations of the reciprocal (two-way benefit) nature of the Quality Mentoring Model. As noted above, she generated the idea for her project. M11 elaborated by saying that,

> she explored a variety of different technical ways to get handles on the questions she wanted to ask....It was her project. It did not start from any particular work we were doing in the laboratory at the time and it is something that, based on her findings, we have acquired an interest in" (M11).

S5, as protege, had offered fresh ideas and innovative methods to her mentor. As a matter of fact, M11 stated that "it's opened up a potential line of research for me

and other people in the laboratory to pursue and I certainly think that it's a project that would be appropriate for a graduate student to pursue for their dissertation" (M11).

M11 said that S5 expressed an interest in returning to do additional work in his lab prior to starting medical school. He hoped that she would be starting medical school at Minnesota. When asked if attracting students to Minnesota was part of his role, he said,

> My motivation for doing this is to attract good people to work in my laboratory. My bottom line is I want science to happen in my laboratory. If I can make that happen as inexpensively as possible, then that's to my advantage and that's why I do this (M11).

M12 is a Professor of Psychology and has been at the University of Minnesota since 1974. She was the mentor to S6 and this was the first time she had had a summer student. She was unsure as to whether or not she would participate again in the future.

M13 is an Assistant Professor of Oral Science and had been at the University of Minnesota for three years at the time of the interview. M13 was not a mentor to any of the students interviewed for this project but had participated in Program B for two years. In fact, M13's protege had been in the program for two summers and he mentored her for both years. He also planned to participate in Program B in the future but was unsure whether it would be with a high school student or an undergraduate student.

M13 said he had two (seemingly juxtaposed) difficulties with Program B. He expressed concern, as did M5, that "you never get to see...the ones that really need it and I think you end up with the top end of these students and also the ones that are smart enough to figure out the system" (M13). Having said that, however, he went on to voice his second concern:

> They really require a lot of attention in order for these students to get a lot out of these programs. Many of us don't realize how much

> individual attention they require. And even a good student like this can't possibly get a number of hours that are needed to really bring them up to speed from someone like myself because...I have a ton of people poking their head in this door and asking me things...I think they have to sort of get what they can from graduate students and get what they can from the lab meetings and get what they can from me when they can get it from me. If they're not aggressive, they're not going to get much (M13).

FACULTY MENTOR RESPONSIBILITIES: THE SEARCH FOR DEFINITIONAL ELEMENTS

This section provides more extensive information regarding Program B mentors' views of their mentoring responsibilities. Research interview statements about the mentoring relationship from the students' viewpoints are also provided here if students were paired with faculty mentors who were interviewed. Finally, a summary at the end of this chapter will integrate mentoring characteristics encountered in Program B with the Quality Mentoring Model (QMM).

M1 said he enjoyed participating in Program B but

> when it gets down to close interactions with the undergraduates, I just don't have time....I spend very little time in the lab....It's much more fruitful if they (the undergraduates) get attached to somebody in my laboratory right away (e.g., graduate or postdoctoral student) (M1).

M1 said he "warned" his undergraduate student that that was the situation and he said she felt comfortable with it. He went on to say that one-hour weekly meetings were held where everyone in the lab would meet together and things would be explained "constantly to one another."

M1 said that an important reason for having undergraduates in the lab is for graduate level training. "They (the graduate students) are being asked questions constantly by the undergraduates so it's really good training for the graduate students as well. You'd be amazed how much better they understand things and oftentimes they're probably better explaining things than I am anyway....They're closer to the immediate problem."

This is a good example of the undergraduate(s) benefitting from the experience of working in the laboratory and the graduate student(s) benefitting as well by providing answers and support to the undergraduate student(s). In this case, the actual mentor (M1) is providing his laboratory as a learning experience for the undergraduate student as well as monitoring his graduate student(s) taking the opportunity to mentor. M1 is offering both the undergraduate and the graduate students an opportunity to learn and grow. M1 said that he loves science and that "in some sense I feel obligated to give opportunity." Again, inherent in the statement is the Eriksonian function termed "generativity." It is motivation that was part of M1's own professional socialization process, stated as a sincere sense of obligation, and coupled with some perception of anticipated fulfillment.

M1 saw his mentoring responsibility in Program B as providing a laboratory where the undergraduate student is linked up with "a second order of mentor" who worked with the student to carry out experiments. In this way, he went on, "they learn an enormous number of techniques and science along the way." He said that he encouraged students to come see him if there was a problem, "but they usually don't...and the reason it never happens is because they already are working with somebody in the lab. So, if they have a problem, chances are they're going to go to 'Person X'." M1 had developed his own views of the mentoring process and his role in it. This researcher interpreted this relationship as traditional mentoring (one-way) because certain relational elements of the QMM are definitely missing, the most important one being reciprocity.

M2 saw her role as a faculty mentor in Program B very differently. When asked what she thought her mentoring responsibilities were she said:

> ...to take the students in, do a good job with them, and actually mentor them. One of the criticisms of many mentors is that they're never around. I think it's a serious commitment and if you don't want to do it--a lot of people get shoved off onto grad students or postdocs or somebody else in the lab. And that's a *bad mistake*, I think, at least I never wanted to give a lot of students to my graduate students because then they can't get their work done....Having the attention

> of the professor, I think, makes students feel good. I think if you foist them off onto a graduate student, they know what's happening....So that's one rule--to mentor them actually (M2).

M2 spent "a lot" of time with S11, both individually and in a group. They had group meetings every day. M2 spent time with S11 in the laboratory educating her in the use of techniques. She also encouraged one-on-one discussions (e.g., "If you don't like what's happening, you need to talk about it and tell me you're not happy, and you need more work or less work"). M2 estimated that she spent "several hours a day, at least" with S11.

S11 said that this was her first experience with a mentor relationship where she "had somebody there with me all the time." She also said she had a lot of interaction with the graduate students in the lab. Of that relationship she said, "They helped me out a whole lot" (S11).

By comparison, M1 provided what could be called a "hands off" ("non-relational") mentoring style, while M2 was very much a "hands on" (in-depth relationship) mentor. M3 provided yet another level of mentoring to her student. M3 indicated by her behaviors a shift in to a whole, new level of relationship depth. She said that most of the time S10 worked with a Ph.D. student and a research assistant in her laboratory. M3 worked, physically, very little with S10 but S10 "was in my office a lot talking about results, why we were doing the experiments in the first place, and stuff like that." M3 also gave new students an overview lecture on the first day, and about one week later. She said that she did that periodically in order to refocus everyone and to keep track of everything. She estimated that she spent approximately 10 hours a week with S10. Even before S10 entered the program, M3 sent her reprints of her publications "so that she could see what we were doing before she got here and to make sure she was interested in it to begin with." M3 said that she had trained close to 75 people--undergraduates, graduate students, postdocs, and technicians so working with students was pretty routine

for her. She considered her role as a mentor as "Everything--mother, shrink, everything!"

S10 had very positive comments about her relationship with M3. Even though M3 could not spend a lot of one-on-one time with lab methodologies with S10, she always felt she could talk with her (and she did). As a matter of fact, S10 considered M3 her friend. She said,

> My mentor said I should come here and she seemed like she was really, you know, a friend. She called me a lot after that, like every other week. So, she seemed like she was going to be a personal friend, too. So I decided to come here for that reason...She's great! I know I'm fortunate because most people don't have mentors who are as open...She's always there and you can knock on her door all the time. And it's never, "Wait a second!" It's always, "Come in." She's never had a time when she's too busy when I ask her a question. She picked me up at the airport, which is unique, because no one else's mentor picked them up at the airport...And she invited me to her house for Fourth of July (S10).

M3 said that she was very fortunate because she herself had excellent mentors for both her doctoral work and as a postdoc. She began mentoring students when she was an advanced postdoc at another institution. She said,

> That's the typical, natural thing. The more senior you get, the more helping you do in the lab. And that definitely happens here. It's the only way to run a lab when it gets big. I can't be out there every minute with everybody, so you've got to have a little bit of a pyramid system in terms of experience so typically I like to team people up as much as possible (M3).

M3 sees her mentoring as "going both ways." She said that she likes to identify prospective researchers early on who are "really good" and train them. She said that "the longer you've got them in your lab, the younger they are, having someone for five years, that's well trained, that's worth a million bucks...And it goes both ways." In other words, by taking the time and making the commitment to train a person, that person will, in turn, contribute many-fold to the mentor's laboratory.

This is a good example of observing the Quality Mentoring Model in action. In the QMM, not only does the more experienced person (mentor) make the

commitment to train a lesser experienced person (protege), but the protege returns that commitment by providing fresh ideas and challenging perspectives to the mentor. Further, M3 talked with S10 not only about things she had to know about lab techniques, but also talked with her at length and with substance about personal aspects of S10's future plans. This is another important aspect of the QMM--mentoring the whole person. When asked if she would be continuing as a mentor in Program B, M3 said, "I already am. S10 is coming back."

Careful examination of the features of the M3-S10 relationship, moreover, requires confrontation with one of the significant questions that exists "between the lines" in the extant mentoring literature--inorder for quality mentoring to exist between two individuals, is some form of "friendship" in the relationship necessary? The issue can be put most simple: In order for quality mentoring to exist, must the protege and mentor be able to see some real sense of "friend" in the relationship? This researcher has concluded from the data from Minnesota with these interviewees that the term "mutual respect" would be more to the point.

M4 saw himself as having several roles as a faculty mentor. He said that he saw his main role as a mentor to "sit down and go over what the issues are in this business; what we do and how we do it." He said that these are the things the student had to learn in order to help them in the laboratory. Then he made an interesting statement that is directly related to the Quality Mentoring Model. He said,

> I'm less interested in her learning that than I am in her learning about whatever it is that she chooses to do....One of my philosophies is not to crowd people. Don't stay in their face. The best thing you can do is guide them, get them excited, and then stand back for a little bit and let them make some mistakes. Let them do well. Try to make it an experience where they are contributing. That's very important (M4).

An important part of the QMM is that the mentor offers advice, information and both professional and personal support. M4 did this. He also considered S12 as making

a contribution to the relationship by being excited about the work and offering fresh ideas. These features point to the essential relational elements of the QMM.

Another facet of the QMM that was practiced by M4 is that he talked with S12 on a personal as well as a professional basis. As he explained it, S12 had experienced some "low time" that summer when she questioned herself ("Am I doing the right thing?") So he talked with her about that and helped her through a rough time in her life. He told her that there are opportunities in science and that she had the capability. He stressed, however, that he didn't want to "ram it down her throat." It was her decision and his role was to encourage but not "push." As he put it, "I do not want to dictate to her. I just want her to know that this is *her* time to decide."

M4 said that "we've talked about other issues as well--just about what it's like to grow up as a Black woman, what it's like to have the world view you have. I've learned a tremendous amount!" (M12). Again, an example of the mentor learning from the protege and of the mentor caring about the whole person; the very essence of the definition of quality mentoring described by the QMM.

Additionally, M4 said that if S12 had a question, he encouraged her to "go to someone else if I'm not here....One of the things that I want her to learn is 'go find the answer'." M4 said he spent about one hour a week on an individual basis with each of the people in his lab, including S12. He went on to say that his management style is to establish teams of two or three people who are working on related projects.

M4 enjoyed being a mentor in Program B and said he had a very positive experience. He mentioned that he had previous experience mentoring students as well. He went on to say that he had a woman mentor as a graduate student and that he was very grateful for that. He said that "women approach things in different ways" and he enjoyed that experience. As a matter of fact, with the exception of one

person, he said that all of his graduate students had been women and that they had won awards for their research. He said, "It's a real good feeling."

S12 was a University of Minnesota undergraduate and had been in Program B for two summers. As a result of being in the Program the first year, M4 hired S12 as a part-time lab assistant. She said, "This has been really beneficial to me" and she hoped to stay in his lab until she graduated because she said, "I couldn't have asked for a better situation" (S12). She said she also interacted with a number of graduate students in the lab.

When asked about his role as a faculty mentor in Program B, M5 stated,

> My actual role this year has been less than my earlier role. I would like to have taken more of a mentoring role, as far as planning for post-baccalaureate education, helping someone decide what going to graduate school meant or a school for professions. But, instead, my role this summer--because I've been gone so much--is directing this student's research and, whenever I can, pointing her to things, trying to explain things. This student is extremely motivated so I didn't feel there was really a need for mentoring in this context, for guidance--not that I wouldn't offer it if it was asked for. So it was mostly for guiding research and offering to help. Nothing else.

M5 explained that this was the third year he had been a faculty mentor for Program B. The student he had the first year came back for a second summer the following year and he said that he spent more time talking with this previous student. When asked how much time he estimated he spent with his undergraduate student, he said he spent approximately the equivalent of one hour per day.

When asked how he saw his role as a faculty mentor in Program B, M6 said that it was to

> provide an opportunity for that student to interact with research personnel--from other undergraduates in the lab, to graduate students, to postdocs, to other faculty members and to gain an appreciation for what research is....I think part of it is to break down a barrier, to provide an atmosphere that is conducive to gaining an appreciation for research....As a student I worked in a laboratory and that experience was what prompted me to be interested in a research career. I'd like to contribute and provide that opportunity for other people as well.

M6 said that he had spent a fair amount of time on a daily basis with S13 working at an off-campus site. Originally, he had hired a postdoc to work over the summer and that individual would have been assigned to S13. As it worked out, the postdoc was not able to begin work until the end of July, thus M6 took on the extra work himself. The work performed by S13 in the laboratory situation was under the charge of a graduate student. He said that

> it's important to interact with other people in the lab because that's a two-way street. It's good for the undergraduate student, but it's also good for the other students in the lab to have the opportunity to train someone. If they're going to go on into more advanced research or faculty role, they have to have that experience....So I try to get the other students involved as much as possible.

The perspective of the need to provide a positive experience for the undergraduate as well as providing an opportunity for the graduate student to teach the undergraduate was voiced on multiple occasions in the course of these mentor interviews. M6 even used the words "two-way street" when describing the interaction between the undergraduate and graduate students in his lab. Reciprocity, of course, is an important component of the QMM, and it does occur when the mentor delegates elements of responsibility. This demonstrates that a protege can have more than one quality mentor simultaneously. As such, the term "second-level mentor" is not insignificant in this research, but it does lie somewhat outside the central focus of this dissertation and will not be dealt with extensively.

S13 stated that M6 was helpful but was gone a lot. Therefore, she interacted with the graduate students and found them "very helpful." When asked if she considered them "second-level mentors," S13 said, "Maybe even 'first-level' if he's (M6) not around" (S13). Even though S13 found M6 to be helpful, she related an incident that demonstrated her mentor's seeming insensitivity to her basic human needs. She said,

> I had a problem...Because I was leaving (for a rural site) at 7 in the morning and wasn't coming back until 6, I wasn't eating...I was

> missing everything (by leaving too early and getting back too late--cafeteria was closed). I contacted (program administrator)...and it came up that I wasn't eating...and I said, "Well, actually I'm missing everything. My friends are bringing stuff from the cafeteria." She said, "Well, I can get you a refrigerator." She was really great...You would think that he (M6) would have thought of those sorts of things! Food is kind of important! (S13).

Again, in terms of facets of the QMM, depth and completeness of relationship is at issue here.

M7 also is also a proponent of a "dual mentoring" role. He said that he would tell the student what they're going to be doing, point out the articles they should be reading, and ascertain from talking with them if they understand what he's talking about. After that, he stated

> I usually put them under the wing of a graduate student or a postdoc fellow and they actually teach them the detailed technique....This gives my graduate student an opportunity to teach somebody else, which is important for them.

M7 said that he was in the lab "all the time" and that everyone in the lab spent time with S4. He said that his laboratory had an atmosphere that was very friendly and supportive. For instance, if S4 had a report to give as part of the program, "we'd go up and support her during the report." S4 told M7 that she felt very much "at home" in the lab and with the other people in the lab.

When asked if he planned to continue as a faculty mentor for Program B, M7 said, "Yeah, I think it's a good idea." He said he liked the feeling of having helped somebody move into research and that it was a good feeling to have "accomplished some kind of teaching function in the research world" (M7). He further stated that Program B added to the prestige of the University of Minnesota because it showed that Minnesota was a place that spends resources on minority students from throughout the United States and "makes sure everyone has an opportunity to come into the science establishment" (M7).

M7 said that his experience with S4 was very positive and that he would support her in her degree, and even graduate studies if she wanted to do that. As a matter of fact, he told her that he would give her a thousand dollars if she got her materials in. He went on to share that S4 sent everyone in the lab thank you letters for giving her the opportunity to work in the lab over the summer. In her letter to M7, S4 said that she considered him "a mentor, a supporter, and a friend."

S4 said M7 was very friendly and understood the needs of the students. She went on to say, "He just knows you have potential and he wants you to develop that potential" (S4).

M8 also was a proponent of the dual mentoring aspect of training in the sciences when he emphasized that one of the goals of Program B was to give the undergraduate students lots of individual contact, not necessarily always with the mentor, but with other people in the lab--graduate students, postdocs, and technicians. He also stressed that it was important that the ethnic minority students had a chance to intermingle with others in the lab because it provided a more "realistic experience for everybody" (M8).

M8 said that his role as a faculty mentor was to

> introduce (the students) to research in biological science....The way that plays out depends a great deal upon the student. It depends on how well prepared that student is, how much background and coursework they have had in the area (M8).

He went on to say that the first few weeks of the program are the most critical and require the most time and effort. He usually introduces the student to a problem, defines some objectives, tells her about ways she might go about getting to those objectives, and then walks her through it, "step by step, day by day." After those first few weeks, he said, the mentor's responsibilities usually taper off. He did not have a graduate student or postdoc in his lab that summer, so he basically provided all the mentoring for his undergraduate student. The time he spent with her

ranged from 10-15 hours the first few weeks, down to about 3-5 hours a week at the end of the program.

When asked if he would be a mentor again for Program B, M8 said, "Perhaps. It depends on what other things are there." He went on to explain that because he has a small lab, there are not a lot of people (graduate students and postdocs) who could work with the students. Before this year, he had worked with the high school program and he said he definitely would only consider working with undergraduates as opposed to high school students because the minority high school students "require even more surveillance and supervision, time and effort, and you can't make as much progress" (M8). He said the program is a great experience for the students but went on to say that

> I also have to look at it from my point of view. In order to survive in the present-day scientific and academic environment, it's too expensive. It's not too expensive in terms of dollars. It's too expensive in terms of energy and time because you basically have to spend a great deal of time planning a project, making sure the project moves along, intercepting it before it "crashes on the rocks," picking up the pieces in case it does, with the idea that at the end of the summer they'll still have something to show so that they can feel good about their experience" (M8).

M9 felt that "the students are uniformly and without exception worth whatever investment that is made" but having said that, he added that

> the goal...is to give them a specific project with goals which can be achieved in the time they'll be in the lab, so that they have an opportunity for a sense of fulfillment. They have to have realistic goals, something that can be achieved, given their background and abilities. I've observed, mostly through experience, that they have to have a mentor, and I have to be able to recognize whether I can do the mentoring, personally, and if I can't, who will (M9).

In the course of the interview, M9 did a bit of "soul searching" about his role and ability to be a faculty mentor. He said

> I participate regularly in the program because I'm here to teach. I have an obligation to promote minority female participation in the biomedical sciences and I like doing it. I like having young people

> around because they ask good questions and they've got huge amounts of enthusiasm and it's an opportunity to get them excited about what I'm doing. The difficulty is that I'm not around very much in the summer....I've come to realize that I can't mentor them. No matter how much I want to, it just won't get done.

In the case of his protege during the summer of 1992, S2 started working in his lab in the spring so she got a "head start" on the project she would be working on over the summer. In addition, because S2 would be working in his lab as an undergraduate until she entered veterinary school at the University of Minnesota, M9 viewed S2 as "an 18-month" person, not a "10-week" person.

Even so, his mentoring responsibilities were shared with two other persons. One was another researcher in a different lab and the second was a veterinary student who was working in M9's lab for the past 18 months and had extensive experience in the project that S2 was working on. They worked on it together as a group. M9 also said that S2 did not require a lot of mentoring because you could tell her something and she would go out and figure it out. She "didn't have to be led by the hand." M9 said that because S2 had been working in the lab since spring, she had sufficient experience so she could get directly to designing and carrying out the experiments.

M9 summed up his mentoring that summer by saying,

> I was a dismal mentor this summer. I didn't participate in a single thing....I didn't do a single thing this year. I was out of town on the banquet. I think I was out of town on the poster session. I was gone the entire time the poster was prepared. I didn't make a single presentation....And I felt bad about that. That's a lower level of participation than should be expected (M9).

Even after admitting his shortcomings as a mentor in Program B the summer of 1992, when asked if he planned to be a mentor again the next year he said, "Oh, yeah! That I'll do year after year" (M9). He went on to say that one of the objectives of Program B for him as a faculty mentor is to fulfill

> my moral obligations as a human being....tapping in to a pool of highly educated and motivated people who are interested in biomedical science....keeping in contact with other faculty and other universities on a semi-regular basis, which has lots of benefits in terms of just maintaining visibility, finding out what other people are doing (M9).

S2 was clearly a strong student. She found M9's laboratory environment to be very comfortable for her. She said,

> He's (M9) very busy. At first I was very concerned about taking up any of his time but I find he is very helpful and he takes the time to explain things....He explains not only what you're doing, but the purpose of it and all the implications....From day one, I felt like I was part of the team...not just an undergrad, a peon (S2).

M10 set very specific goals for his summer undergraduate student. He felt his role as a mentor was not so much to get her interested in nutritional research, but, rather, to give her the opportunity to experience "what the scientific process is." He went on to say that he endeavors to make sure these undergraduates

> understand the background to the issues they are going to study, that they can identify and articulate the specific set of aims or specific questions that they're going to answer in this eight-week period, that they then have some concept of how to go about designing a study to answer those questions....Our second goal is to have them learn certain procedures, so that they have "hands-on" experiences....The third goal is to be able to communicate (the findings) in a scientific manner to an audience....And that's a lot to cram into eight weeks (M10).

M10 estimated that he spent two to three hours a week with his undergraduate student but that there were others in the lab who were teaching her as well. For example, a postdoc spent a couple hours a day with the undergraduate student doing a lot of the "nitty-gritty supervising work." M10 added that at the end when his student was working on her poster, he spent quite a bit more time with her.

M11 said that his mentoring role with S5 was to help her "figure out how to do the things we wanted to do during the summer," but also to introduce her to the graduate students in the lab, and give her an overview of what Minneapolis and the

University of Minnesota were like and try "to make a case to a Black student contemplating medical school or graduate school that this might be a friendly place to go" (M11). M11 and S5 also had a variety of conversations about Black colleges, what their roles were, and what the roles of talented Black people are in higher education and what influences persons to continue in a Black college for graduate work.

This pair had a variety of discussions on social issues. M11 said he spent at least half an hour each day with S5 on an individual basis, then another hour a day in group interactions. He also did some "recruiting" of S5 on four or five occasions during which he would "give her a feeling for what I do and what I think is exciting about science and those sorts of philosophical kinds of discussions" (M11).

The routine in M11's lab was that everyone ate lunch together, informally, in order to get to know each other better. When he found out that S5 had done previous research on breast cancer at her undergraduate institution and was interested in pursuing a M.D./Ph.D., he "put her in contact with a variety of students in the department who were in the M.D./Ph.D. program and had specific interest in breast cancer also" (M11). These two examples, especially the latter, definitely go beyond the "traditional" role of mentoring and fit to the functional requirements in the QMM, through which the mentor offers insights, information, and both professional and personal support. Indeed, where he mentors to the whole person. The issue in this case is the degree and extent to which this occurred.

S5 said that both M11 and the female graduate student worked with her. She stated that M11 wasn't around much so she basically relied on the graduate student to answer her questions.

M11 said that he planned to continue being a faculty mentor for Program B but that his primary task was to train graduate students. As such, his commitment "has to be primarily to individuals who are going to be working in the laboratory

over a period of time generating data and generating data papers and opportunities for more funding" (M11).

M12 considered her mentoring responsibilities to include talking with S6 about her future career plans, talking about the project they were working on, and contributing by reviewing S6's paper and oral presentation. She also had gone out of her way to contact S6 before she came into the program, but said that her project director had the most contact with S6 over the summer. The project director was the one who gave S6 her the daily work assignment, who supervised her, and who answered her questions. S6 was the only minority student working on the project. When asked how much time she personally spent with S6, M12 said, "Not a huge amount....An hour here, ten minutes there."

M12 said that the summer experience was good for both her and S6. She said that that was a time when she didn't have funds for her project and that it was good to have "a student come to work who brought a little money along, too" (M12). On the other hand, she said, "Being a university professor is to work with students and teach them about research," so she felt it opened new doors for S6 as well.

S6 confirmed that her main interaction was with the project director. She said that she had a positive feeling about Program B but, because she was the only Black person on M12's project, she felt isolated.

M13, when asked what he felt his mentor responsibilities were, said:

> to provide a learning environment for them....We are expecting that you will be around here. We'll provide you with the opportunities to learn. We'll assign you to a student. We'll assign you lab times. We encourage you to ask questions. We do everything to make it a pleasant environment....This is a chance to see this university in a work-type setting, rather than in an educational-type setting (M13).

When asked why he was participating in Program B he stated bluntly, "It is an opportunity to have a free body around to do something for you. You don't have to pay anything" (M13). He went on to declare that his motives were also a bit more altruistic in that

I think it is nice to provide students that are really in need with an opportunity to see this. It really is a chance that they may never get, that they may never understand....Let's face it, it's pretty much a White, middle-class, male kind of world here. I think that if you can encourage students to see this a little bit and try and treat them well, perhaps they will think of it as an alternative they might not have previously thought of (M13).

The following table summarizes the faculty mentor demographic information:

TABLE 8

Summary of Faculty Mentor Demographic Data

Mentor Code	Rank	Gender	Department	Years at U	Protege Code
M1	Professor	M	Biochemistry	3	N/A
M2	Assoc. Prof.	F	Food Science	5	S11
M3	Asst. Prof.	F	Pharmacology	3	S10
M4	Assoc. Prof.	M	Lab Medicine	4	S12
M5	Asst. Prof.	M	Cell Biology	3	N/A
M6	Assoc. Prof.	M	Animal Sci.	5	S13
M7	Professor	M	Microbiology	30	S4
M8	Professor	M	Biochemistry	25	N/A
M9	Assoc. Prof.	M	Vet Pathology	7	S2
M10	Assoc. Prof.	M	Pediatrics	1.5	N/A
M11	Asst. Prof.	M	Lab Medicine	2	S5
M12	Professor	F	Psychology	18	S6
M13	Asst. Prof.	M	Oral Science	3	N/A

PROGRAM B AND THE QUALITY MENTORING MODEL (QMM)

The data in this case study clearly document that even though faculty mentoring is widely accepted as a "major component of the teaching load of many faculty" and is considered to be "the only proven method of teaching students how to conduct modern research" at this University, commitment to, degree of, and personal investment in mentoring by faculty varied significantly. One end of the scale could be described as total commitment to quality mentoring. The other end of the scale evidenced faculty either delegating significant mentoring responsibilities (in both degree and type) to their laboratory graduate research assistants, or using the summer undergraduate students as little more than cheap labor. Further, mentors' attitudes toward mentoring varied from very committed, to feeling badly that they clearly did not fulfill their mentoring responsibilities.

This case study did provide a considerable number of examples of behaviors supporting the key characteristics of the Quality Mentoring Model. Three mentor/protege pairs especially exemplify characteristics depicted by the Model.

The S5 (African American with a B.S. in zoology from Howard University who is currently pursuing a M.D. at Howard University) and M11 (male assistant professor in laboratory medicine) pair is viewed as exhibiting many of the characteristics of the Quality Mentoring Model and, therefore, complying with requirements this researcher considers a truly reciprocal relationship of documented benefit to both the protege and the mentor.

It is possible from the data to derive certain important differentiations. For example, M11 provided S5 with advice, information, and both professional and personal support. If this comprised the full extent of this mentor-protege relationship, it should have been considered a one-way, traditional mentoring relationship. What made the M11-S5 mentoring experience move far beyond the traditional relationship definition is that S5 took the materials M11 had given her and actually generated and proposed her own project which was "created distinct

from the routine things we do in the laboratory" (M11). As such, S5 provided fresh ideas and innovative methods to her mentor and, as such, actually "opened up a potential line of research for me and other people in the laboratory to pursue" (M11).

S5 not only received invaluable training and experience in M11's laboratory, but she also made a useful and worthwhile contribution to M11's laboratory research routine and to the scientific world as a whole.

A second pair that provides credibility and support to the Quality Mentoring Model is the mentor-protege relationship of S10 (African American who received a B.A. in Biochemistry and Chemistry from North Carolina State University pursuing the M.D. degree at University of North Carolina, Chapel Hill) and M3 (a female assistant professor in pharmacology).

Even before S10 came to Minnesota to participate in Program B, M3 made her feel welcome, cared about, and "special." Not only did she provide S10 with this personal support, but she provided her with professional support as well. A noteworthy example of mentoring success was the achievement of M3 securing a National Institutes of Health (NIH) grant for S10 (in S10's name solely). M3 also said that S10 might be a co-author on a paper that would come out of this research. Both of these are contributions that M3 made to S10's future career. These are admirable examples of M3's provision of professional support for S10.

S10 contributed to this quality mentoring relationship by showing enthusiasm and an innate ability to ask stimulating questions. In addition, the grant that M3 secured for S10 continued through the following year, enabling S10 to plan to come back to work in M3's lab the following year.

As described earlier, M3 considered her mentoring as "going both ways" (another way of stating the reciprocal, two-way street, requirement of the QMM). She liked to identify young researchers early on, then train them over a number of years. Then when the protege used that training to "give back" to the relationship,

M3 felt it was "worth a million bucks." So, by taking the time and accepting the relationship responsibility and commitment to train S10, M3 actually did reap the rewards of S10's contributions to her laboratory. Indeed, an in-depth reciprocal relationship and a good example of quality mentoring in action.

A third example of the dynamic described by the Quality Mentoring Model in relationships in Program B is the S12 (African American who received a bachelor's degree in biology from the University of Minnesota and is currently pursuing a M.D. degree at Northwestern)-M4 (associate professor of laboratory medicine and pathology) pair.

This mentor-protege relationship was unique in several ways and makes particular contributions to this research. First, S12 initially participated in Program B in 1991 and as a result of that experience, M4 extended the relationship to hire her to work part-time in his laboratory while she completed her undergraduate degree. Second, S12 participated in Program B for a second time during the summer of 1992, therefore she was already a member of the team in M4's lab and had previous experience. Therefore, she was able to make contributions more rapidly than would have been the case had she not had the previous year's laboratory experience.

M4 practiced a "guide them, then step back" form of mentoring. He offered advice, information, and both professional and personal support to S12, each necessary elements of the QMM. He also considered S12's contribution to the relationship to be her excitement about the work, her continuing professional growth and development, and her offering of fresh ideas.

Another "two-way street" feature and, therefore, significant element of this S12-M4 quality mentoring relationship is that M4 talked with S12 on both a personal as well as a professional basis. As stated earlier in this case study, M4 wanted to learn from S12. For example, they had discussions about what it was like for S12 to grow up as a Black woman. M4 said that he "learned a tremendous amount." This

is not only an example of the mentor learning from the protege, but also is an example of the mentor caring about the whole person.

It is this crucial latter element required by the Quality Mentoring Model that provides the Model's meaningful contribution to the ongoing research into the difference between *what might* assist us to achieve specified academic goals, and what *probably will* assist us to achieve those same goals for targeted student populations.

CHAPTER VI

CASE STUDY #3: PROGRAM C GRADUATE PROGRAM IN EDUCATION

DESCRIPTION OF THE PROGRAM

In 1989, the University of Minnesota's College of Education received a grant from a foundation to form an educational consortium with U.S. Historically Black Colleges and Universities (HBCUs). The grant funded a program for recruitment of 20 African American students annually for study in education at the graduate level. This is how Program C began. The nine original HBCUs included: Alcorn State University, Elizabeth City State University, Fisk University, Grambling State University, Morgan State University, Morris Brown College, Tuskegee University, Wiley College, and Xavier University.

The primary purpose of Program C includes these key facets: is to make provision for the recruitment of graduate education students, their financial assistance, elements of support during their graduate studies, and career development and job placement assistance.

The specific goals of the program are to: 1) increase the number of students of color in the college; 2) develop relationships between the College of Education and the Historically Black Colleges associated with the program; and 3) make a positive impact on the number of well-educated and certified African American educators in the Twin Cities area of Minnesota. Case study #3 describes this program, the women students interviewed in that program, and the role mentoring played in the program at the time of the interviews (1993) and more recently as well. See Figure 10 on the following page for a summary of Program C.

Every fall, the program coordinator at the University of Minnesota makes recruiting visits to all nine HBCU campuses located in other states. She disseminates information on the program, answers questions about the program, the

FIGURE 10

Program C

PROGRAM C

- GRADUATE PROGRAM - EDUCATION
- ESTABLISHED IN 1990
- AFRICAN AMERICANS
- SOME FORMS OF MENTORING ARE AVAILABLE, BUT STUDENTS HAVE TO SEARCH INDIVIDUALLY TO RECEIVE IT

  BOTH STUDENTS AND FACULTY ARE FAIRLY WELL REPRESENTED, COMPARED TO OTHER TWO PROGRAMS

University, Minnesota (e.g., weather), and helps prospective students fill out application forms. All completed applications are subsequently sent directly to the coordinator who prescreens them for qualifications and appropriate data.

Applicants to Program C have to meet the same admissions criteria as other students applying to various departments in the Minnesota College of Education. Not only must applicants meet the admissions criteria of the particular department to which they are applying, but they also have to meet the Minnesota Graduate School admission requirements. Interview data show that personal communications between the coordinator and the prospective students (e.g., letters, phone calls) were considered very important influences upon both the students and program coordinator. As a matter of fact, the students interviewed during this research agreed that the personal attention given by the coordinator many times made the difference between coming to Minnesota or going to another institution. Once the student is admitted, the coordinator also provides transitional assistance (e.g., housing).

One key element of assistance provided students in keeping with Program purposes is transitional in nature. The Summer Institute which is held during the summer prior to entering the program provides strong, relationship-building support. The purpose of the Summer Institute is to help acclimate the new students to the University of Minnesota, give them information about the University as well as their roles as graduate students and graduate assistants. It provides the students an opportunity to meet faculty members, and gives HBCU and University of Minnesota faculty members an opportunity to explore common interests. It also brings new students together with continuing students who had, themselves, previously attended a Summer Institute. In some cases, new students accompany continuing students to class so the former have an opportunity for exposure to actual classes. The new students interviewed commented that they discovered this was a very supportive process. In fact, one student (S16) described herself as

"shy and reserved" and said that during the Summer Institute, "it was the first time that I felt a bond that quickly with people."

As the coordinator describes it,

> It brings them all together. It creates a community for them....It's like a community of support for students so they get to meet a lot of folks. And I've found that that transition mechanism is very important to students being able to experience a sense of connectedness with the university and with the department (A4).

She went on to say that, "The program offers them a way to get connected with the university and community, to try to find a place in this place so that they can feel that they can be successful here. The whole purpose for it is to support their success in the program" (A4). The Summer Institute, therefore, is a relationship-building "bridge" between students' HBCU environment and entry to the Minnesota program per se.

A significant part of Program C involved students working as research assistants to college faculty (preferably in the student's area of concentration such as elementary education or secondary English education). The coordinator discussed the applicants with faculty in the college to see if there was a "match" between student and faculty member. The coordinator additionally had a separate network of faculty at each of the HBCUs who work directly with the program (e.g., promote the program among their undergraduate students who are anticipating going on to graduate study).

When students subsequently enter the program, they are provided an array of personal and academic socializing activities. Just as one example, the coordinator and students meet as a group on a monthly basis. The purpose of these meetings is to provide support to the students, to encourage interactions between the students, and personalized interaction between the coordinator and the students. The coordinator also monitors the students' progress and discusses on a one-on-

one basis any problems students may have. This relationship is sophisticated and multi-faceted and is discussed further later in this case study.

Each student was provided with a paid research assistantship and tuition waiver stipend. Master's degree students were provided with six quarters of financial aid and tuition waivers. They could utilize them as they wished. Ph.D. students are given funding for at least nine quarters with additional funding opportunities available on a limited basis. Students are also provided with stipends for moving expenses, travel expenses, books and school supplies, and a stipend is available if a student wishes to attend a conference. Most students stayed on campus through the summer and took classes, thereby completing the program in a shorter period of time.

The majority of the students in Program C were concentrated in either a Master of Education or Master of Arts degree program. At the time of the interviews, there were only two Ph.D. students in the program (one of these doctoral student was interviewed).

DEMOGRAPHICS OF STUDENT RESPONDENTS

At the time of the interviews with Program C participants in Spring 1993, there were 14 women in the program. Of these, four (29 percent) were interviewed. All women interviewees were U.S. citizens and were single. Three of the interviewees were 22 years of age. One was 46 years old.

The three master's degree students obtained their undergraduate degrees from HBCUs: Fisk University (B.A., English), Alcorn State University (B.A., English Education), and Elizabeth City State University (B.S., Elementary Education). The fourth student (a doctoral student) received her bachelor's degree (Elementary Education) from Harris Stone, and had two master's degrees--one from Washington University (MEd, Secondary Education) and the other from Washington State (M.S., Biomechanics).

One student (S15) was a first-generation college student. Both of her parents were high school graduates. Another student's (S16) mother had two years of college and her father earned a master's degree. The third student's (S18) parents were high school graduates and her mother was seeking a nursing certificate. The last student's (S20) mother was a high school graduate, her father graduated from college, and two of her brothers were also college graduates. One brother achieved a Ph.D. and another received an engineering degree. The third brother graduated from technical trade school. Except for the mother who was pursuing a nursing degree, all parents were employed.

Three out of the four interviewees stated that they intended to pursue an academic degree. One stated that the reason for this was: "I'm from a large family and academic opportunities have been few and far in between. I feel I have a gift of intelligence and I'm going to take it as far as I can and eventually 'give back' to my family and community" (S15). Another student stated that she wanted to be a professor because she could be a motivator for students and that she wanted to instill in them that there is value in education (S16). The third student who intended to pursue an academic career said she wanted to be a university professor and do research because it allows for freedom to pursue other sources of income and public service (S20). The one student who was not planning to go beyond the master's degree stated that she planned on teaching in the elementary school classroom because her "love for children led me to this decision a long time ago" (S18).

Later, a follow-up research interview with the program coordinator was attempted. It was found that the coordinator had left that position to pursue a doctoral degree. The person who replaced her stayed for a short time and then also departed the program. As a result, graduation statistics obtained for Program C are limited and little additional information was available from Graduate School sources. However, through the follow-up research in 1995 it is known that both S15 and S18

entered Program C in Fall 1992 and graduated in Fall 1993. S16 entered the program in Fall 1992 and expected to graduate in Spring 1993 but Program C sources were unable to confirm her status. S20 entered the program in 1990, was last registered Spring 1994, but had not received the Ph.D. degree as of Summer 1995.

COMPARISON OF UNDERGRADUATE INSTITUTION WITH UNIVERSITY OF MINNESOTA

As mentioned earlier, three of these women students were from HBCUs. These institutions were described by the students as schools where the faculty took a genuine interest in their students. Many of the faculty gave students their home phone numbers and encouraged them to call if they needed to do so. The climate was described as "pretty friendly" (S15) and there were more interpersonal interactions between students than had been experienced thus far at the University of Minnesota.

The three students from HBCUs said they missed the personal attention and direct contact with faculty experienced on their undergraduate campus. At their HBCUs they had a far better chance to talk with their professors on a one-on-one basis. They stated the University of Minnesota was different from their undergraduate institution. They did not have an opportunity to interact with faculty on a one-on-one basis and professors were not as accessible and oftentimes were too busy to talk with students outside the classroom. Minnesota class sizes were comparable to their undergraduate classes (around 30-35 students per class); however, the Program C students said "it was just different" because they did not receive that "personal touch." At Minnesota they felt that they were "just students taking classes."

One of the most obvious differences between the HBCU overall environment and the University of Minnesota Twin Cities campuses is that the HBCUs are predominantly African American populations and Whites are in the minority. At the University of Minnesota, a predominantly White institution, just the opposite is the

case. Generally, the students interviewed during this research made the transition as well as might be anticipated due to their strong skills at admission. As one student said, however, a positive attitude was very important. She said that some of her friends talked about problems they were having with "the Caucasian interaction and stuff" (S18). She described herself as "an easy person to get along with...open-minded and I just accept people for who they are. I just don't look at their skin color" (S18). She was confident of her abilities. She knew that she was admitted because she met the same requirements as everyone else who was admitted. She was not here solely because she was a person of color. She had to have a certain GPA, she had to fill out and submit the application forms (including letters of recommendation). She stated, "The way you see me, that's the way I am....I am just as equal as they are!" (S18). With this innate confidence and positive attitude, her adjustment was relatively uncomplicated.

S15 had a positive attitude about her experiences at the University of Minnesota. She said, for instance, that "a lot of people have a sincere interest in your problems and try to solve the problems and not (having the attitude of) just letting them go by...and with time they'll get better" (S15). She went on to say that, "at home somebody White could find you real attractive but they wouldn't come right out and *tell* you. Whereas *here* (they may tell you)--and I kind of like it because people are more open-minded, too" (S15). However, S15 also went on to make a statement that assists in understanding her perspective. She stated that she considered herself lucky because she had not experienced racism either at the University of Minnesota or in her home state of Tennessee.

S16 said that one of her friends told her that perhaps the reason she liked it at the University of Minnesota so much was that she could be Black on her own terms. She went on to explain that the student population at her undergraduate school was about 3,000, compared to about 40,000 students at the University of Minnesota, and she saw this as an advantage. She said:

> I think for a lot of Black students to be in an all-Black institution at some point in their life is really good 'cause they feel a bond and a real connection with other students of color. But the big difference is population and being in a small place, everybody notices what you do. And there's a certain standard that you have to fit in to, as far as like a dress code or (how to) wear your hair and a lot of times you feel stifled by that. You know that there's another part of you that you want to express but you can't. So, here at the University of Minnesota...everybody's about their own business. They don't really notice as much what you're doing. It's "do your own thing."...The major thing here is that you can be yourself, on your own terms, and you don't have to try to fit in (A16).

Of course, carrying her comments further raises issues of students being not only left alone, but ignored, if not isolated. More discussion of this occurs below.

S20, the doctoral student interviewee, had a very different background and attitude than the HBCU students. She had more than a dozen years' teaching experience at a different institution. That institution was also a public, predominantly White institution and the word she used to describe her former institution was "uncomfortable" (S20). She went on to say that it was uncomfortable because she felt it was a "closed society," both socially and professionally. She explained that she did not have any ties or associations there and that she had stayed there as long as she did because she "didn't believe it was as bad as it really was." She said she was denied a promotion and was even denied letters of recommendation. She explained that due to this situation she felt "locked in" and she finally decided that by going to the University of Minnesota she would be getting out of a very bad situation, at least for a period of time. She added that after graduation she had to return to her former institution for one year.

Racism was considered by these students to be "alive and well everywhere." But at the University of Minnesota they felt it was more subtle. S15 said that in the South if a person didn't like someone, they would let them know. There a person would "just keep your distance and do what you have to do" (S15). One student stated that she experienced subtle racist actions and attitudes from other students. For example, she said,

> If I'm talking to someone on the phone, sometimes they might think that I'm White so they're...really friendly. Then when I show up in person and they see that I'm Black, I see kind of a coolness. And I don't think they mean to do it on purpose. Maybe it's a surprise sort of thing. I don't know (S16).

Continuing the interview topic of racisim, S16 said that the extent of racist activities depended on the part of the South in which a person grew up. For example, she said:

> In the high school that I went to, there's a different prom for Black people and there's one for White people. But at another high school, which is in (a different) area, they have their prom together. Within the South itself, there's not a lot of racial disharmony. There is some subtle stuff (S16).

Regarding her experience at the University of Minnesota, S20 stated, "The University has its own culture and its norms and its expectations and its professionalism and I try to be just as obscure as possible and fit into the woodwork" (S20). Because S20 was a doctoral student and, therefore, an older, more experienced student, she had a different perspective on the climate at the University of Minnesota. She said the climate is "not what it could be but it was so much better than where I was that this was easy" (S20). She went on to say, however, that for an undergraduate student coming from a traditionally Black institution (as is common for students in Program C) into graduate school at the University of Minnesota, they could "have some *serious* problems with this institution" (S20). She went on to explain that over the years she had developed certain survival skills (having already spent a number of years at a predominantly White institution). She said that the Black community in the South is very nurturing, warm, comforting, and supportive. She went on to say,

> You can't get that from someone who has never given it...They don't even know...a simple thing like a smile or...a greeting can make a difference. ...Something's wrong with these people up here! They don't smile. They don't even look at you!...And it's very difficult because you start to question yourself. You start to say, "What's

> wrong with me?"...You get that from the Blacks and the Whites up here (S20).

One student (S18) said that the students in her classes at the University of Minnesota were "different." As she described it, at her undergraduate institution, students were there with basically the same level of knowledge, seeking the same things. In her master's-level classes, however, she felt inadequate and somewhat intimidated because

> the majority of them, with the exception of...three or four of us in the class, have experience. They're out there in the schools. They're working. They're teaching. So, they can bring a lot of knowledge in. Whereas me, I have no experience other than student teaching and I can't bring anything but what I experienced in my student teaching, which is very little, because that was just a 12-week thing (S18).

Because many of her class assignments required "in-classroom experience" and because she did not have this day-to-day classroom experience, she felt that the other students had "the upper hand, the advantage" (S18). She became very frustrated and discouraged. This student was resilient, however, and made the decision to use the ideas the "experienced teachers" brought to the classes. She said, "I'm using their ideas, taking notes, and keeping a log of everything they present, everything they give. I have it because I'm going to use it!" (S18).

S16 liked the resources the University of Minnesota has to offer. She came from a small school that "didn't have a whole lot of money." Comparing her undergraduate institution to the University of Minnesota, she was especially impressed with the computer facilities available to graduate students. She went on to say that she felt the University of Minnesota, on the whole, had a lot of money (compared to her undergraduate institution) because "they have computer facilities, they have libraries, they have bookstores, cafeterias within each dorm. And to me that's really fascinating because the school I came from, there was one cafeteria" (S16).

S18 was also impressed with the University of Minnesota's resources. She said it opened up a whole new learning experience for her. At her undergraduate institution they had computers, for instance, but they were limited to computer science majors and other students could only use them during limited hours. At the University of Minnesota, she was "amazed" because, "Here you can go pretty much anywhere and there's a computer. Even in our dorm we have a computer" (S18).

SOCIALIZATION FACTORS: PERSONAL AND ACADEMIC

Because these students were in different departments, there was limited opportunity to get together as a group. The students only saw other students in the Program if they were in their department or were in class together. The program coordinator recognized that these students were coming from their undergraduate experience into a very different environment. In order to build a feeling of solidarity between the members of the Program, she met with the students on a regular basis because it gave them

> an opportunity just to get together and feel very comfortable in a safe environment, to say what's on their minds. And *that* becomes a very important thing. There are not a lot of safe environments for students in this place for them to really say what it is they're thinking and feeling so this becomes a place to do that (A4).

The doctoral student said she interacted with the other students in Program C, but it was on a different level. Because she was a university professor herself (and because by this time she had already been in the program for a couple years more than the other students in Program C), she said the students looked to her as a person they could go to when they had a problem. She said she was able to help them because "it's all in the matter of knowing what to do" (S20).

S15 said that she helped the socialization of undergraduate athletes at the University of Minnesota by being a group leader at a study table. She also tutored in her dorm. She said she did this because

> I consider myself a pretty strong little person and I'm going to do what I have to do to survive anywhere. But everybody's not always like that. And so you need that support....The undergraduate students don't have somebody they can really turn to (S15).

Socially, these students had a tight-knit group among themselves. They tended to join together going to plays, clubs, and concerts. Even though the students lived in different dorms, they phoned each other on a regular basis and they were "always connecting and talking to each other" (S16). They "had a friend to do something with. Just call somebody up and usually there's somebody available" (S15). As she described it:

> We're very close and I guess that's probably because we're in this new environment....We're all from Historically Black Colleges. So we're used to being around a lot of Blacks. So when we come up here, I see Blacks, but I don't see a lot. And then some of them have different perspectives than we do, coming from the South....I guess maybe just because there's not a large Black population on campus, when we see each other, it's a big deal!...Some of us are like just really close. It's a really close knit family type thing (S15).

On the other hand, another student (S16) said, "I pretty much do my own thing." (Refer to isolation comments above).

Moving forward in the research interview to mentoring, some of the students identified the Program coordinator as a mentor. One student described an important component of this mentoring strength as being the Program coordinator's open-door policy. She said,

> The (Program coordinator's) doors are always open for you to just stop by and talk because, believe me, I have *worn her ears out* this quarter! She's always there. You can make appointments or you can just drop in just to say hello....She's a mentor herself. We present problems and she writes them down. If she doesn't have a solution then, she goes and finds a solution and gets back with us (S18).

When asked to describe the mentoring relationships she had with the students, the Program coordinator said:

> I have a lot of one-on-one student contact....I have progress checks with students once a month. They come in for a minimum of a half hour and just kind of talk about what's going on. And then we might trade ideas back and forth about a variety of different things....There're many different things students need to be thinking about....If there are issues with work situations, with the academic situations, then it's a time to have those things brought out because with 20 students, they're not always going to self-select to come see me when there's an issue. So this is kind of a stop-gap measure kind of thing, try to identify some of those things and head them off, and also just to talk. That becomes very important. They go through a lot of different changes as they come to this environment and sometimes are hesitant to even say it because they think it's mainly only in their heads. So sometimes just a conversation is reinforcing. To say, "Well, no, it's not just you. This is kind of how it is. Let's talk about strategies to deal with it." The student meetings and the progress checks are structured times I speak with them and most everything else is on a need basis. Usually it's just the business of getting through this place (A4).

This administrator said she enjoyed this mentoring relationship with the students and that her background as a teacher gave her experience in assisting people to meet their educational goals.

The doctoral student (S20) said she had a student mentor who was also a doctoral student in her department and she shared an office with him. She stated, "That's the only way I got through those first two years!" (S20).

The following comments from S20 tend to offer insights into comparisons between advisor functions and mentoring functions. She said that her advisor was not helpful so she turned to her office mate as a peer mentor. Even though he was White, he offered her many "survival" tactics that helped her because she had no idea what to expect. He helped her with both personal and academic matters. He told her about the weather. He told her which courses to take, which professors were the best, how many credits to take per quarter, when to schedule exams. As she described this peer mentoring relationship, "He was the one that did what an advisor would do. He had me on schedule with the coursework, with the things that I needed. If it hadn't been for him, I would have *never* gotten through this Program" (S20).

Because students from Program C work as research assistants for faculty members in their department, faculty are involved in the admissions process as well as the research assistantship assignments. As part of the application process, students fill out a form that the coordinator and departmental faculty use to "match" students with faculty advisors/research professors (similar to the process for Program B). Each student is assigned a faculty advisor; however, faculty can have more than one advisee. According to the interviewees, the student's advisor can be the same as his/her research faculty or they can be different. The students interviewed during this research experienced one or the other condition.

One student (S16) said that at first she was not very involved with her faculty member's research but the longer she was in the Program, the more research responsibilities she was given. In this particular case, this student's faculty advisor was also the professor with whom she had her research assistantship. She stated she felt comfortable with him, even though he was a White male. She said he was informative, helpful, and accessible. She was impressed because he didn't mind her calling him at home with questions (similar to her undergraduate professors).

Another of the student's (S18) professors was her advisor and her research professor. She had him for class as well. She said she met with him on a regular basis, usually at least twice a week outside the classroom. Her duties involved

> researching, updating information, any news articles, journal articles, that I run across when I'm researching in the library...keeping his information updated. And then he will give me other assignments for other research...and he may need articles or information pulled up on certain topics (S18).

This mentor-protege relationship contained interpersonal qualities making it a good example of the reciprocal nature of quality mentoring. Both individuals benefitted from the arrangement.

S18's advisor was helpful to her by having her work with computers. As she said, "Since I've been over here now, I've become more computer literate because I was just totally computer illiterate. And he suggested some classes I took in computers and he, or his department, paid for me to take the classes" (S18). This was training she could use while in the Program as well as in the future.

When asked if S18 considered her advisor a mentor, she said that she did and went on to explain. She said she had been having a problem and he sensed it and could see her frustration. Because she also had him for a class, he would initiate an appointment and ask her to stop by after class or during a break. He told her that he could see that she "just looked so all into" herself. When he asked her what was wrong she said it had been a bad day. Then he told her to come to his office the next day and and they would talk about it and see what could be worked out. When she went in to see him the next day, he not only met with her, but he presented her with two options to her problem as well. The depth of involvement of the advisor indicated an actual mentoring relationship. The mentoring function of self-initiated outreach is atypical of a large number of advisor-student relationships. Again, this particular mentor-protege relationship exhibited one priority characteristic of quality mentoring--the mentor is concerned with the whole person.

S15 had one professor for her advisor and another professor for her research assistantship. When asked if she would consider either or both of these professors as mentors, she said that she considered her advisor as a mentor because he was "very open minded and he's into multicultural education, which is really important to me" (S15). She said he "really helped out a lot" when she had problems, personal or academic. In this relationship, the mentor was seen as a caring person but there was no evidence given in the interview of a reciprocal element which would raise the relationship from traditional mentoring to the level of quality mentoring. She did not talk about the other professor.

The doctoral student (S20) said that her faculty advisor was about to retire so her interaction with her was very superficial. This was one of the main reasons she turned to her office mate as a peer mentor, as described above. S20 said that she knew the material of her discipline and was ready to teach a course. The particular course she wanted to teach was

> always given to the same person--same White male. He's in a position of power. He's been nurtured. He's been groomed....Here I am, in the same position but just not quite given the opportunity to teach the class, to work in the lab, to work on projects, to publish articles. Just *not quite* (S20).

When asked if her advisor assisted in remedying this situation, S20 said that not only did she not help her with this situation, but when S20 was in line for a laboratory position, the advisor hired a White female instead.

The situation for S16 was different. S16 said she met with her advisor once a week for 1-1/2 hours. During that time she had an opportunity to voice her concerns (e.g., academic progress). Because her advisor was also her research supervisor, he sent her to the library to look up certain articles and S16 reported her findings to him at the weekly meeting. It was like a class with assignments and reports and one-on-one interaction between S16 and her advisor/research supervisor. It appeared that this interaction had the beginnings of a reciprocal relationship. However, at the time of this interview, the relationship needed time to grow in order for it to exhibit additional characteristics necessary to meet the criteria of a quality mentoring relationship.

S16 was another to describe the Program coordinator as a mentor. When asked to compare and contrast the mentoring relationships she had with the Program C coordinator and with her advisor/research supervisor, she said,

> I like (advisor) as a person 'cause he's got a great sense of humor that I like. Also he has no problems with people calling him at home. That's one good thing that can make a student feel comfortable with him, even when discussing academic progress. But I think I feel more of a bond with (Program coordinator) because she's a woman of color

> and she comes from the South as well so she knows what it's like as a Black person growing up in the South. And that's not to say that I can't talk to (advisor), but there's already a bond between (Program coordinator) and I. I'm sure that if I tried to talk to (advisor) about that, he would talk to me the best that he could....With (Program coordinator), I feel comfortable with her. She can share experiences with me and also she was an English teacher for 12 years....She knows the importance of making connections when you come to the University of Minnesota...to form kind of a friendship with someone, not always of color. That's a good way to share your experiences. To sum it up, (Program coordinator) is a female of color from the South and so I can talk to her. (Advisor), he taught English too, but he's a White male (S16).

S20, the doctoral student, said that she had two advisors. When asked if she considered one or both of them as mentors, she answered "of sorts." She went on to explain, "I can go to one for certain problems and I can go to the other for other problems. This person can provide one thing, and this other person can provide something else that the other one can't provide. So they both do *their* kind of mentoring. They do what *they can do*" (S20). She added, "It's not adequate." That is another reason she turned to her office mate for peer mentoring.

I asked S20 what sorts of things she sought from a mentor. She said, in an academic setting, "a mentor has to want to be your mentor." She went on to say,

> They have to be accessible. They have to be knowledgeable....You have to think that that person has your best interests at heart, regardless of all the things that may happen. And you have to have confidence in that person. You have to establish a relationship. And you have to establish a rapport that at least you know you can go to that person when you need help (S20).

Another socializing mechanism mentioned by students in Program C was facilitated by community mentors. These community mentors were educators from local schools who were assigned to the students as an element of program structure. Each quarter a dinner was held and community mentors and students came together. Some of these community mentors were graduates of Program C. These mentors were described as "somebody that we can call" (S15) and someone with whom the students could socialize. It was up to the mentor and student as to how active they

would be. Some went out to dinner, did things in the community, and attended church together. Others kept in contact through the telephone but did not get together on a face-to-face basis regularly.

The community mentors checked with the students on a regular basis. They would also send cards on holidays and special events, and to an extent they kept the students informed. One student (S16) described this mentoring as "a way that they can share their experiences with us and we can share our experiences with them...and also get us acclimated into their school system if we'd like. We can do practicums....So it's just a bond between all of us" (S16). Note the reciprocal nature of the sharing described for this student/community mentor relationship. Another student put it succinctly: "They're basically there for me...Whatever I need, I can call them" (S18).

S20 said she had become involved with a church for support and that most of the other students from the South have also established some relationship with a church. These church relationships, then, oftentimes lead to other support mechanisms and associations.

RESPONDENTS' OVERALL EVALUATIONS OF PROGRAM

As Program C is supported by a foundation, formal evaluations are made on a regular basis in order to promote support for on-going funding. At the time of the interviews (1993), an evaluator had been hired and through the process of collecting data over the course of the year, wrote the first evaluation document. The conclusions reached in the report were:

> (Program C) continues to meet its original charge in that a consortium of nine Historically Black Colleges and Universities are working with the University of Minnesota's College of Education to recruit, on an annual basis, 20 African American HBCU graduates for advanced study in education. The 1993-94 recruitment process resulted in 19 applicants for the seven available awards; 14 new students were accepted into the CGC program and participated in the 1994 Institute; 25 students completed the 1993-94 academic year; 11 students graduated. Of the 21 students who graduated since the beginning of

> the program, 10 have been teaching and 4 have applied for teaching positions in Minnesota.

It was generally agreed by the master's degree students that the program was accomplishing what it had set out to do; namely, recruit, retain and graduate students from Historically Black Colleges and Universities. In fact, one of the master's degree students was surprised that she could finish up so quickly (six quarters) by continuing to take classes over the summer (S15). The doctoral student (S20), on the other hand, had reason to expect to be provided with financial aid for longer than three years. Her funding was cut and she had not been told until February that she would not be receiving support after June. The situation affected her views of her relationships at Minnesota.

One major concern regarding expectations of the program expressed by both the master's degree students and the doctoral student was that they would be able to do more research than was actually the case. Some of the master's degree students said they had research assistantships but were doing secretarial duties instead. They stated they were assigned typing tasks and making copies rather than being involved with research. They felt that if they were able to do research in their field, they would feel like they were doing something of value (S16). The doctoral student said:

> When I came in, I initially thought, just from the information that I had gathered, that we were going to be sort of a research support group for each other. So I was getting all excited and keyed up about writing research grants to bring in money....That's what I thought and that would give us practice in writing our own research and writing our own grants and getting money for whatever, from whatever sources and implementing programs and getting some articles published by the end of those three years. But I have not had any research grants. I have not done any grant writing. I have not had any articles published. Nothing since I have been here....So when I came in, I thought that that's what people were supposed to be doing. And I have not seen any evidence of that or any implementation of that kind of program (S20).

Two of the three HBCU graduates (S15 and S16) said they thought the Program was "a real success" (S15). S15 went on to say that the Program had opened some doors for her and that it had given her a chance to get experience, to meet people, and "to learn new ways in the educational circle" (S15). S16 said she was skeptical of the Program at first because she wasn't sure what other people would think. She worried that people would say, for instance, "You're just giving Black people money." She went on to say, however, that while the Program *did* give them a chance to come to the University of Minnesota, it also gave them the chance to prove that they *could* achieve all the academic goals that someone set. "Not because someone gave it to us, but that we really can do that" (S16).

The third HBCU graduate, S18, was definitely happy that she would be graduating in less than a year from the time of her interview. When asked to evaluate the Program she said, "Well, my goals are being met because of *my determination to make them work*" (S18). She explained that she came into this graduate program directly after graduating from her undergraduate institution and she was tired of school. She suggested that those students who come into Program C right out of undergraduate studies should be provided with an opportunity for experience in a school system. She explained that they were "getting all this knowledge but we haven't actually put it to use to see if it works" (S18). This interviewer suggested that perhaps the community mentors could help with this and S18 agreed. However, S18 did not at that point confirm the community mentors' relationships as reaching out to the students for this purpose.

She did say that participating in Program C "was a good decision, even though sometimes I regret it" (S18). She went on to say that she thought the program was a great program that offered opportunities to minorities, and that it is a chance to broaden one's knowledge. She said she would recommend the School any day and would advise anyone when presented this opportunity to pursue it.

As a matter of fact, S18 planned to accompany the Program coordinator when she scheduled the next recruiting cycle.

As described above, some of the students were not satisfied with their assistantship assignments. Those who were assigned to work in the library said they spent most of their time photocopying, typing, and checking books in and out. In another instance, a friend of one of the students interviewed worked in the audio/visual area checking equipment in and out. These students thought they could better use their time by doing research with a professor.

A number of the students said they would like to see the Program offer more funding. They said housing costs were unexpectedly high here and one student said she was paying off loans at the same time. After making those payments each month, she had very little left over. S20, the doctoral student, said that funding for Ph.D. students should be for longer than three years. She said it was unrealistic to think that a doctoral student could complete the Program in that period of time. She said,"I need to know I've got dissertation monies....I don't need to be scrounging around trying to get money to get this thing off the ground" (S20). She said that she did not think that the Program itself was bad but that the implementation of the Program was not what it could have been. She went on to say,

> I think the idea's great. I think the concept is great. I just think they need somebody who is going to be able to implement the program the way it was designed to be implemented. And there is no reason why any of the students should not successfully complete the program...(S20).

In sum, suggestions the students made to improve Program C include:

1) For students coming into Program C without at least 1-2 years' teaching experience, an opportunity within a regional school system (e.g., internship) should be provided. The community mentors should be used as resources to accomplish this.

2) Research assistantships should actually consist of working on research projects with faculty (as opposed to, for instance, doing clerical work such as typing and checking books at the library)

3) More funding--both the amount of funding per year and also offer all Ph.D. students funding for a specified period longer than three years.

4) Expand the mentoring elements of the program to support minority student retention and graduation rates within Program C and at the University of Minnesota as a whole.

PROGRAM C AND THE QUALITY MENTORING MODEL

At the time of the interviews, Program C did not have a formalized mentoring program. The community mentors facet existed, but they were actually seen as outside influences. As was demonstrated in this case study, however, various levels and types of mentoring were perceived by many students as actually having occurred. Some of the students identified Program C's coordinator as a mentor. Using the composite of this researcher'sanalysis of different mentoring definitions as a guide (see Table 4), it can be seen that the functions described by both the students and coordinator were of the traditional, "one-way" mentoring relationship (she gave advice, provided counsel, created an understanding of the educational bureaucracy, acted as a role model, etc).

S15's advisor was depicted as a caring person but there was no evidence from the interview that the interaction with her mentor went beyond a traditional "one-way" type of mentoring. There was no evidence, for example, that the important reciprocal element was present in the nature of that relationship.

For lack of a better alternative, the doctoral student (S20) turned to her office mate as a peer mentor. He provided advice and counsel and also provided emotional support and encouragement and developed S20's trust. This researcher categorizes this level of mentoring as the "student support system" variety. It

definitely was described as mentoring because of the depth and length of the relationship.

S16 had considerable interaction with her advisor. Based on the information received and data analysis of the interview, it is believed that this relationship showed the beginnings of a reciprocal relationship. Therefore, it is this researcher's opinion that this relationship could have evolved from traditional mentoring to quality mentoring as, with time, the relationship developed depth and became more complex.

Of the students interviewed from Program C, S18 and her faculty advisor/mentor demonstrated the best example of quality mentoring. There was a reciprocal nature to their relationship in that he provided her with research opportunities and skills and she kept his research information updated. It was further shown that the mentor was concerned with S18's success as a whole person.

A second instance where a mentoring relationship was shown to have a reciprocal aspect to it was that of the students and the community mentors. In some of these relationships, the community mentors and students shared their teaching experiences, the students could do practicums at the mentors' schools, and the mentors and students socialized on a personal basis.

The Program coordinator (A4) said that they are always looking at how things have impacted the students, how they can do things better so that it's not a "canned thing," so that it's flexible enough to meet individual needs, yet stable enough to provide a "clear entity of support for students" (A4). One of the new ways to support students is with a deliberate mentoring program.

The planning for this mentoring element for Program C occurred in the same months as the interviews with participants in Program C. At that time, administration and the coordinator stressed that "requiring that the mentor relationship be central to assignment of graduate assistants capitalizes on the wealth of opportunities available for students across the College and extends

faculty opportunities to interact with diverse students." In other words, a reciprocal, "both parties benefit" attitude was encouraged. The coordinator stressed that this new feature was "an experiment" and she didn't know how it would turn out. Implementation was planned to begin the next academic year (1993-94). Therefore, implementation occurred *after* these students were interviewed.

The Program coordinator stated in her interview in 1993 that she was initiating a new model for assigning students to faculty. The assignment of graduate assistantships was being expanded to include a mentoring component. In this model, faculty members were to nominate themselves as mentors, accept the required commitment, and departments would be required to support students by providing a certain amount of money to cover additional costs.

According to a March 19, 1993 Program memorandum to College of Education faculty, the following steps were identified in order to locate faculty interested in mentoring students and facilitating the faculty/student matches:

1) The coordinator will gather information about student interests and experiences through interviews, (Program) supplemental information, and other application materials.
2) Department chairs and Directors of Graduate Studies will solicit nominations for faculty mentors.
3) Interested faculty members will contact the (Program) coordinator to provide proposed project information which includes a description of the project, duration, location, skills needed, funding available.
4) Mentors and students will meet during summer institute and explore the potential for successful matches.
5) Final assignments will be made by June 30.
6) Faculty and students will provide feedback on the effectiveness of the match.
7) A formative evaluation will guide program revision.

In the proposed mentor program, the typical depiction of a mentor is a person "who helps to translate the culture of the department and the environment for students and serves as a resource." However, what is directly pertinent to purposes of this dissertation research is the reciprocal element to this proposed mentoring program. When describing the "mentor relationships" in a subsequent program document, mentors were described as persons who "teach, encourage, counsel, and develop talent which requires that the mentor and mentee *work together towards common goals on projects that develop the student's professional skills while accomplishing faculty objectives*" (italics mine). Therefore, the College of Education describes mentor's role as helping develop the protege's professional skills, and the protege's role as providing valuable services to the mentor.

Because the coordinator left Program C as the new mentoring program was initiated, it was not possible to obtain information as to the relative success or failure of this new element to the Program. However, it certainly can be said that if this form of two-way relationships was established as a part of the program, it would be beneficial to both the mentor and protege, which is the essential reciprocal premise of the Quality Mentoring Model.

CHAPTER VII

SUMMARY, CONCLUSIONS, AND CHALLENGES TO THE INSTITUTION

SUMMARY

The focus of this research was to investigate three programs in three different colleges at the University of Minnesota that are designed to recruit, retain, and graduate persons of color at the postsecondary level. The study described the role mentoring played for women of color within each of the programs. The broad research questions were: 1) How do students and faculty/staff perceive the mentoring process within these three University programs? and, 2) How do these perceptions illuminate the Quality Mentoring Model (QMM)?

The three programs are quite different with respect to level of mentoring and degree of underrepresentation of minorities within the disciplines. Minority students and minority faculty are somewhat underrepresented in Program A (master's degree level program in business) and mentoring is not a planned part of this program. Program B is an undergraduate summer mentoring program in biological sciences. Both minority students and minority faculty are greatly underrepresented in this field. In Program C (graduate-level program in education), students have to search individually to receive mentoring. Both minority students and faculty are fairly well represented, compared to the other two programs.

The University of Minnesota, the site of this research, is literally a huge institution. Compared to other population clusters in Minnesota, it actually represents a large city. What happens at the University, therefore, often is expected to have an impact on the State of Minnesota. The institution has a commitment to diversity and to improving its ability to recruit and retain students

and faculty of color. In 1989, the University established three five-year diversity goals to be achieved by Fall 1994:

1. to double minority faculty hires;
2. to increase minority enrollment to 10 percent of the systemwide total; and
3. to improve by 50 percent the five-year graduation rate of undergraduate students of color.

The February 1995 Report presented to the Board of Regents by the Office of the Associate Vice President for Academic Affairs and Associate Provost with Special Responsibility for Minority Affairs stated that all three of these goals had been met. According to this Report, first, a total of 144 new minority faculty members were hired by October 1994. Second, increasing numbers of matriculants of color, rising annual retention rates of minority freshman classes in the past few years, and enhanced institutional diversity efforts are seen as contributing to the attainment of the 10 percent minority enrollment goal. It was noted, however, that the proportion of students of color in the Graduate School was 6.6 percent.

Third, this report stated that 23.1 percent of the 1989 minority freshman cohort achieved "their degree objective within five years, demonstrating a 55.0 percent improvement over the graduation rate of the Fall 1984 freshman class of color" (Office of the Associate Vice President for Academic Affairs and Associate Provost with Special Responsibility for Minority Affairs, Five-Year Progress Report on the Status of Students of Color: Enrollment and Graduation Rate, February 1995, p. ii).

The Report went on to state, however, that when examining retention and, more importantly, graduation of students of color, the picture is dismal. For example,

> The University of Minnesota compares favorably with other Big Ten institutions in terms of the proportion of minority enrollment in relation to total institutional enrollment. However, enrollment is only

> the beginning of the graduation process. Addressing retention through graduation is of greater significance to the University of Minnesota now. In an effort to learn where the University of Minnesota ranks among the Big Ten institutions, we reviewed the data collected by the University of Oklahoma which had the most recent information on the five-year graduation rates of students at the Big Eight and Big Ten institutions. In that study, the University of Minnesota did not compare favorably with the other institutions in the Big Ten Conference. In fact, we were at the bottom of the group (Office of the Associate Vice President for Academic Affairs and Associate Provost with Special Responsibility for Minority Affairs, 1995, pp. ii-iii).

This dissertation research specifically focused on mentoring in higher education and is aimed at increasing the information base. This researcher sincerely hopes that the University of Minnesota will benefit from the expanded base and can improve effectiveness in recruiting, retaining, and especially in graduating women and, indeed, all students of color. This research starts with the position derived from current literature that mentoring is part of the important institutional dynamic of social integration of students.

There is a growing body of evidence indicating that social and academic integration tend to have a differential influence on persistence for different kinds of students (Astin, 1985; Pascarella and Terenzini, 1991; Tinto, 1987). A central and recurring theme throughout Pascarella and Terenzini's (1991) study of 20 years' of college student experiences is that "it is clear that many of the most important effects of college occur through students' interpersonal experiences with faculty members and other students" (page 164). Mentoring is an attractive approach to meeting the needs of certain groups of students who are most at risk of leaving the university before graduation.

These same authors found in 1979 that the frequency of informal contact with faculty to discuss intellectual issues and the perceived quality of interaction with faculty and peers had their most positive influence on persistence for students who came from families where parents had relatively low levels of formal education.

Mentoring should not be overlooked when examining the options for positive impacts on student persistence. For minority students, mentoring programs can mean the difference between isolation and integration; failure and success. Social and academic integration levels of students in the higher education institution can be affected by mentoring. In certain instances, it can be the most significant process in a student's life.

Moreover, mentoring not only is a process that could contribute to increasing the recruitment and retention of minority students in colleges and universities through to graduation, but it can also contribute to the numbers who enter and complete graduate training, are hired for faculty positions, and are retained as contributing members of the academy.

Mentoring addresses several causes of student attrition and delayed graduation, including the lack of proper academic preparation for college, the lack of knowledge about or access to social, academic, or financial resources, and the absence of a comfortable psychological milieu for matriculation (Gavin, 1989; Stampen & Cabrera, 1988). Based on the literature review, an assumption made in this present research is that faculty contact has a significant impact on the academic and social integration of students enrolled in colleges and universities. It is reasonable to assume, then, that the quality of faculty contact in the form of mentoring may have a significant impact on women students of color, the focus of this present study.

The research examined for the literature review indicated that the responsibility for mentoring outcomes basically rests with the mentor. The role of the protege is neither fully considered nor thoroughly discussed. Conversely, this researcher's conceptual framework, the Quality Mentoring Model (QMM), recognizes that mentor behaviors cannot be separated from protege behaviors. The behaviors of each are in some manner related to the behaviors of the other (reciprocal).

Drawing on Eriksonian psychosocial theory as a core, the earlier Anderson-Shannon (1988) Mentoring Model is expanded to emphasize the realities of the reciprocal nature of quality mentoring. In addition, certain organizational considerations as well as administrative implications of mentoring in the higher education institution are explored using perspectives of Tinto's attrition theory.

Vincent Tinto is one of the best known and respected researchers of attrition. His Theoretical Model of Dropout Behavior has been widely considered and tested since it was introduced in 1975. His theory of persistence at the undergraduate level focuses on the reasons underlying the actual dropping out or persistence of a student.

A common thread running through Tinto's attrition research is that the decision to withdraw or persevere is influenced by the extent to which a student's intellectual and social integration occurs. He states,

> ...the more time faculty give to their students, and students to each other, the more likely are students to complete their education. Both academically and socially, such informal contacts appear to be essential components in the process of social and intellectual development of individuals and in the rewards they seek in entering higher education....(I)nstitutions should encourage those contacts whenever and wherever possible (1982, page 697).

One point especially important to this present research is Tinto's investigation of social conditions of students and views of the college as a social system with its own values and social structures. He found that "it is the individual's integration into the academic and social systems of the college that most directly relates to his or her continuance at that college" (1975:96) in that "lack of integration into the social system of the college will lead to low commitment to that social system and will increase the probability that individuals will decide to leave college and pursue alternative activities" (1975:92).

In other words, those students who are not sufficiently integrated into the fabric of the college society (via facilitation of socialization)--those who, for

example, hold values highly divergent from those of the "social collectivity"--many times suffer from insufficient personal interaction with other members of that society. Mentoring, then, could and should be considered as a significant vehicle for students to achieve both personal and academic socialization.

The emphasis of this dissertation research is that a quality mentoring relationship is a "two-way" process. The responsibilities and benefits of a quality mentoring relationship are of equal importance to both the mentor and the protege. Long before the benefits and importance of mentoring interactions were "discovered" and more recently studied, Erik Erikson was conducting research on the human life cycle and developing psychosocial theories. Erikson divided the human life into eight stages of development and the main emphasis of this conception centered on views on the development of human potential (Erikson, 1987:596). For purposes of this dissertation research, the emphasis is upon Stage VII, Adulthood: Generativity vs. Self-absorption. In discussing this stage, Erikson said that humankind has evolved in such a way that we are both a teaching as well as a learning animal (Erikson, 1987:607).

Dependency and maturity are reciprocal in that mature individuals need to be needed, and maturity is guided by the nature of that which must be cared for (Erikson, 1987:607). Erikson's term for this caring is generativity. Generativity is primarily the concern with establishing and guiding the next generation, including productivity and creativity; this is psychosocial in nature. From generativity emerges the strength of care. Erikson says that generativity encompasses procreativity, productivity, and creativity, and thus the generation of new beings as well as of new products and new ideas, including a kind of self-generation concerned with further identity development. The Quality Mentoring Model developed in this dissertation research is inseparable from Erikson's conception of the "strength of care" and the depth of the faculty-student relationship becomes a paramount issue accordingly.

Mentoring is an excellent vehicle for passing on customs and knowledge to a new generation (protege) as well as contributing to a healthy personality through generativity dynamics for the mentor. Following Erikson's lead, then, the point is that the mentor and the protege each make a contribution to a quality mentoring relationship. Where and when the relationship is more one-sided, the relationship suffers as does the quality of the mentoring.

This research derived its concept of quality mentoring as necessarily comprised of a comprehensive, complex, interpersonal matrix of functions. Certainly the advisor/advisee relationship is one important type of mentoring. However, to be most constructive and pertinent here, mentoring must be viewed in terms of multiple mentors. Stress is placed on the fact that everyone is a potential mentor. A university advisor is primarily concerned with one's institutional, procedural tasks as a student. Certainly an advisor could become a mentor. However, the traditions of the terms as well as the tasks of each are different. A mentor guides, protects, and empowers a protege; the mentor is concerned with the success of the whole person. These features delimit, describe, and define valid quality mentoring.

Quality mentoring takes into account what this researcher considers to be the most realistic and effective of the mentoring definitions established to date. More importantly, however, it recognizes one critical component of effectiveness which has neither been emphasized nor thoroughly considered in any of the mentoring research examined; namely, the reciprocal aspect of the mentoring relationship. In the quality mentoring relationship, mentoring is envisioned and experienced as a two-way street, a mutually beneficial relationship. Both parties have something to offer one another. A mentor offers advice, information, and both professional and personal support. A protege at the very least offers fresh ideas, recognition for the mentor, innovative methods, and the creation of a new audience as the relationship deepens.

Through qualitative case study methodology, students, faculty, and administrators were interviewed in all three programs for the specific purpose of comparing and contrasting their perceptions of the mentoring process and its relative emphasis or non-existence in each particular program. In addition, data were obtained from written documents and individual program statistics. Thus, triangulation, or the process of identifying dominant trends emerging from multiple data sources (Yin, 1989) was achieved, thereby adding to the construct validity of the study. To further add to the validity of the study, follow-up research was conducted in late 1995 to identify details on the graduated students (Program A and C) and which of the students in Program B went on to graduate studies. Lastly, each administrator (if available) was invited to review and comment on the chapter devoted to their particular program.

It is helpful to reiterate in this context that this dissertation research is intended to offer several contributions to higher education, initially offering a contribution to the development of University planning to improve the recruitment and retention of women of color. It is a fact that effectiveness in retention dynamics directly affects graduation rate statistics, now of considerable concern at Minnesota.

The literature review indicated that integration of organization participants as fully as possible into the system and activity of the organization has significantly influenced valued outcomes. Since mentoring has proven to be such a powerful tool for social integration into the "organization culture" in the business world, this present research examines certain functions of this variable within a sector of academia. Therefore, it attempts to facilitate and expand this understanding of the mentoring process forward into higher education. To build this bridge, it is necessary to determine the construction of the mentoring process.

Therefore, a second important contribution of this research is to simultaneously define mentoring in a comprehensive manner and to use that

definition to suggest a new model emerging from the results of the present research. There exist many historical definitions of mentoring but none met important requirements of the salient realities of this research study. Once the larger social context was understood, and the circumstances and conditions of the higher education institution were examined, it was possible to develop a definition and goals of quality mentoring, both within individual relationships as well as on the programmatic level. For purposes of this dissertation research, my definition of quality mentoring is:

> The Quality Mentoring relationship is a dynamic, reciprocal process, formal or informal, based in mutual respect in which a more skilled or experienced person (mentor) serves as an enabling role model for a less skilled or less experienced person (protege). At the same time, the protege can provide the mentor with a fresh viewpoint and new ideas. The key point of *quality mentoring* is reciprocity—mentoring is a two-way, growth-facilitating relationship with both mentor and protege having responsibilities for the relationship and reaping benefits from the relationship.

It is hoped that a third contribution of this thesis derives from the conclusion that the mentoring process can help to expand an academic and social milieu where diversity is truly valued. Thus, the university may be strengthened by attracting more students and faculty who are currently underrepresented in numerous disciplines. More majority faculty members will become sensitized to the experiences of students and faculty of color, a larger number of students of underrepresented ethnicity will be supported through to graduation, and contributions will thereby result so that racial and cultural groups will be strengthened in substantive ways both socially, and, eventually, economically.

A fourth contribution of this dissertation centers in the fact that research into mentoring in higher education and the resulting research literature have both been limited. Where it does exist, most of the research data on social integration and the mentoring factor in American higher education has examined the undergraduate experience. This research, on the other hand, is deliberately

intended to expand knowledge in this area by investigating the mentoring socialization factor for women students of color in special programs in *both* undergraduate and graduate education. Therefore, this investigation makes a valuable contribution to an area of research that to this point had yet to be examined comprehensively.

CONCLUSIONS

How is mentoring manifested in the higher education environment? What in this research has specifically constituted quality mentoring? What are the salient features and functions of quality mentoring as encountered at the University of Minnesota, Twin Cities? These are some of the questions actually developed by this research and investigated.

Returning to the central decisions of the initial research design, the three programs were selected because of their differences with respect to forms of the mentoring factor originally anticipated and also due to the varying degrees of underrepresentation of minorities within the pertinent disciplines. The mentoring factor within these three programs ranged from none to an operational attempt to make mentoring become a focal point of the program.

Participants in this study spoke at considerable length regarding their views of the mentoring process, where it existed. They spoke equally at length about directly related problems when mentoring was absent. The kind of mentoring relationships experienced (or not experienced) were examined during this research and dominant trends in student and faculty/staff perceptions of the mentoring process were described. Finally, at the end of each case study, dimensions of mentoring that embodied the Quality Mentoring Model (QMM), as well as those that lacked certain QMM characteristics, were specified and supported by examples from each Program. This is summarized as follows.

Program A does not have a formalized mentoring program. It was demonstrated in Case Study #1 both that the women participants in Program A did not have faculty mentors and that they correspondingly felt that faculty had no interest in getting to know them or learning about their American Indian culture.

To overcome these less than supportive conditions which flew in the face of crucial elements of their cultural upbringing, the first two women who entered the program in 1990 combined as a team. Both agreed that it was necessary to have another woman American Indian student in the Program. All women participants in Program A were pretty much on their own. Any mentoring that occurred was peer mentoring. The entering women students relied on the second year students for support. They viewwed the peer mentoring that occurred as crucial to their progress and success in the program.

Case Study #1 demonstrated that even where there is no formalized mentoring program in place, those individuals involved will see the need and fill that need to the degree they can through their own means. In this case, the students fulfilled components of their needs through informal peer mentoring. Indeed, this peer mentoring was acknowledged by both the administrators and students themselves and was recognized as an important survival tactic.

In **Program B**, mentoring is planned and students are paired with faculty in various science disciplines, using a formalized faculty decision making process. It was found, however, that commitment to and degree of mentoring provided by faculty varied significantly. One end of the scale was described as total commitment to mentoring. The other end of the scale was illustrated by faculty either delegating significant mentoring responsibilities (in both degree and type) to their laboratory graduate research assistants, or using the summer undergraduate students as little more than cheap labor. Through in-depth interviews with both students and mentors, it was shown that mentors' attitudes toward mentoring

varied from very committed, to feeling badly and actually declaring that they did not fulfill their mentoring responsibilities as they understood them.

On a positive note, this case study did provide a considerable number of behaviors supporting the key characteristicsof the Quality Mentoring Model. Three mentor/protege pairs were shown to especially exempify attributes depicted by the Model. These pairs clearly confirmed that the Model describes a valid and realistic dynamic, that the core elements of the Model are pragmatic, and that the perceived results of the operationalized Model develop strong, positive attitudes on the part of the participants.

It was shown that the first pair exhibited characteristics of a reciprocal mentoring relationship. For example, the mentor provided his protege with advice, information, and both professional and personal support. The point was made that, had this been the full extent of this mentor-protege relationship, it would have been considered a one-way, traditional mentoring relationship. However, what made this mentoring relationship move beyond the traditional mode to one of a quality mentoring relationship was that the protege, utilizing information given her by her mentor, generated and proposed her own project which was seen as one that was "distinct from the routine things we do in the laboratory" and actually "opened up a potential line of research for me and other people in the laboratory to pursue" (M11). Thus, the protege provided fresh ideas and innovative methods in a reciprocal manner to her mentor.

In the second example pair, the mentor provided her protege with both personal and professional support. An example of this is that she was successful in securing a National Institutes of Health grant for her protege (in her protege's name solely) and also suggested that her protege might be a co-author on a paper that would come out of the research conducted during that summer experience. The protege's contribution to this quality mentoring relationship was that she showed enthusiasm, had an innate ability to ask stimulating questions, and, because the

grant continued through the following year, both mentor and protege benefitted by the protege returning to work in her mentor's laboratory the following year. This "two-way" benefit is an important feature of the QMM. As a matter of fact, the mentor declared her mentoring as "going both ways" because she liked to identify young researchers early on, then train them over a number of years. When the protege used that training to "give back" to the relationship, this mentor felt it was "worth a million bucks" (M3). Thus, by taking the time and accepting the relationship responsibility and commitment, this mentor reaped the rewards of her protege's contributions to her laboratory.

A third example of the exemplification of the QMM in a mentoring pair was between S12 and M4. S12 initially participated in Program B in 1991 and as a result of that experience, M4 extended the relationship to hire her to work part-time in his laboratory while she completed her undergraduate degree. Because S12 participated in Program B for a second time during summer 1992, she was already a member of the team of M4's lab and had previous experience. Thus, she was able to make contributions more rapidly than would have been the case without that experience.

M4 practiced a "guide them, then step back" form of mentoring. He did not mean by this "guide them, then disappear." He offered advice, information, and both professional and personal support to S12. M4 considered S12's reciprocal contribution to the relationship to be her excitement about the work, her continuing growth and development, and her offering of fresh ideas.

Another significant element of this quality mentoring relationship was that M4 talked with S12 on both a personal and professional level. For example, they had discussions about what it was like for S12 to grow up as a Black woman. He said he "learned a tremendous amount" (M4). This is an excellent example of the QMM requiring the mentor caring about the whole person. The research showed that

emphasis is needed on this point. Successful quality mentoring is distinct from the traditions of university advising, or even traditional mentoring. Where an advisor may commonly step back saying, for example, "I don't need to know this or that about this student," during quality mentoring the mentor takes a very different approach. For example, the quality mentor may say, "I want to know everything meaningful about my protege. I want to know the individual as a whole person."

At the time of the interviews, **Program C** did not have a formalized mentoring program. But, as described in Case Study #3, various levels and types of mentoring were, in fact, employed by the women participants.

Some of the students identified Program C's coordinator as a mentor. Upon closer investigation, it was determined that the coordinator gave advice, provided counsel, created an understanding of the educational bureaucracy, and acted as a role model. Therefore, this particular relationship was determined to be of the traditional, "one-way" type.

The relationship between S15 and her "mentor" was also determined to be of the traditional variety because there was no evidence, for example, of a reciprocal element to the relationship.

The doctoral student (S20) did not have a faculty mentor. Therefore, she turned to a peer for mentoring. This was an unfortunate situation because both the literature and this researcher's personal experience demonstrate that it is especially important for doctoral students to have quality faculty mentors. Doctoral student and faculty interactions exist on a different plane and should be collegial and reciprocal. In such relationships, ideally the student progresses from the position student to becoming an actual colleague wherein both faculty member and student work together on research projects or teaching assignments. Both have responsibilities for the success of the mentoring relationship. Both reap the benefits of the reciprocal aspect of quality mentoring. In fact, the doctoral student-faculty member relationship just may be the ideal academic setting in which

to define, foster, and operationalize the Quality Mentoring Model developed in this dissertation research.

Similarly, in the commercial organization, quality mentoring has its greatest opportunity for profound impact at the highest levels of the organization where concept, applied theory, and expansive operations are crucial to the success of the next evolving generation, or growth stage, of the firm. Erikson's concepts in this research have led to these conclusions as well as to the observation derived from this research that where the "generativity characteristic" is not evident in the mentor's personality, an equal absence of commitment to the protege will occur. Successful quality mentors tend to envision the protege as inseparable from a successful career.

S16's interaction with her advisor showed promise of evolving beyond the functions of the traditional mentoring relationship as it showed the beginnings of a reciprocal relationship.

Of the students interviewed from Program C, S18 and her faculty mentor demonstrated the best example of quality mentoring. There was a reciprocal nature to their relationship in that he provided her with research opportunities and skills and she kept his research information updated. It was further shown that this mentor was concerned with his protege's success as a whole person.

An extra-institutional illustration of a mentoring relationship evidencing a reciprocal aspect was between the students and the community mentors. In this relationship, the community mentors and students shared their teaching experiences, the students could do practicums at the mentors' schools, and the mentors and students socialized on a personal basis.

CHALLENGES TO THE INSTITUTION

Quality mentoring is not a panacea, but it should be viewed as an especially effective means of intervention in the academy's attempt to meet the needs of culturally diverse students and thereby graduate these students. Quality mentoring systematically addresses causes of student attrition and delayed graduation of culturally diverse students by 1) promoting high impact student/faculty contact, communication and understanding; 2) encouraging the use of university resources designed to aid students with problems directly impeding academic progress; 3) intervening promptly with academic difficulties; and 4) creating a culturally validating psychosocial atmosphere. All will benefit if mentoring relationships are successful. Minnesota can use this tool to deal with its graduation rank in the Big 10.

Major research institutions such as the University of Minnesota should continue to intensify efforts to recruit more minority students, both at the baccalaureateand graduate levels. Perhaps most importantly, once persons of color have been recruited, postsecondary institutions must provide a reasonably hospitable climate if these students are to be retained, have positive growth experiences, and achieve graduation.

One of the most remarkable conclusions derived from the data in this research is that Minnesota needs no further evidence of the cold and unwelcoming campus climate encountered by students of color. At Minnesota we already know enough about that. It is time to select and expand use of the tools to professionally change this self-defeating environment. Mentoring is one tool for increasing minority participation and success in higher education. It is important to note that students who leave a university because of negative experiences relate those experiences to potential students in their communities, thus creating the reputation that the university is insensitive to culturally diverse populations. In a sense,

mentoring can be an important marketing tool because it sends a message that the university is a place where faculty, staff, and administrators care.

As a founding member of the Coalition of Women Graduate Students at the University of Minnesota, this researcher was part of a team of women graduate students who in 1993 and 1994 organized and presented two University of Minnesota mentoring workshops and co-authored a publication entitled, *Improving the Climate for Women Graduate Students Through Quality Mentoring at the University of Minnesota.* In that publication we stated:

> The responsibility for mentoring rests collectively and individually with the regents, president, administrators, departments, faculty, and graduate students. If the University is to have effective quality mentoring, the University must encourage individuals and groups to play a crucial role in the process of developing, implementing, and promoting mentoring programs and relationships...A student-centered approach is at the heart of our recommendations. Graduate students must play a central role in all efforts to improve mentoring (page 6).

In that document we also made a number of recommendations (i.e., challenges) for improving mentoring relationships at the University of Minnesota. These challenges were directed to the regents, to the president, to vice presidents and administrators with academic units, to the graduate school, to the deans, to departments, to faculty, and to graduate students.

In addition, we made recommendations for developing, implementing, and promoting mentoring activities, programs, and relationships as follows:

- Faculty must be rewarded for all mentoring activities, including advising;
- Graduate students must be involved in all areas of mentoring development;
- All mentoring efforts must be evaluated on an ongoing basis;
- Diversity must be central to the development of current mentoring efforts;

- More women faculty (especially full professors) and professors of color are needed;
- Faculty and directors of graduate studies must strongly advocate mentoring;
- Sexual harassment and sex discrimination must end.

Indeed, Dr. Josie Johnson, Associate Vice President for Academic Affairs and Associate Provost with Special Responsibility for Minority Affairs, stated in her 1995 Report to the University of Minnesota Board of Regents,

> We need to develop a unique and systematic method to evaluate outcomes for student success....As a research institution, we should be in a position to share information on what works and what doesn't in helping students of color attain academic success in Big Ten institutions. The University of Minnesota should be in the forefront of providing the type of data that would guide institutions like ours in the process of recruiting, retaining, and graduating students of color. Many of our programs would be able to serve as successful prototypes to be replicated at other institutions (*A Five-Year Progress Report on the Status of Students of Color: Enrollment and Graduation Rate*, pages iv-v).

In keeping with these points, this dissertation research has directly offered several contributions which translate to specific recommendations for higher education. Certainly, it may contribute to the development of this university and other universities' planning to improve the recruitment and retention of women students of color. Successful retention decisions directly result in improved graduation rates.

To make a meaningful contribution, this research must be understood within the context of a much broader administrative perspective. If mentoring programs are to be successful in a climate of ethnic pluralism, formal commitment of each institution to specific goals of retention, mentoring, and diversity pertinent to the institution's circumstance and location is critical. The commitment may come in the form of mandated policy statements, financial support, and allocations of space, personnel, and communication structures. In addition, the inclusion of mentoring

as an acceptable service activity for faculty promotion and tenure can be an excellent signal that the university community views mentoring as truly important. Stated more bluntly, in higher education institutions, mentoring activities need to be recognized and rewarded if they are to achieve the goals set for them.

The mentoring process can help to create an academic and social milieu where diversity is valued. Thus, theoretically, if mentoring is taken seriously and is institutionalized, the higher education institution will be able to attract more underrepresented students, more faculty members will become sensitized to the experiences of students of color, a significant number of underrepresented students will be able to graduate, and racial and cultural groups will be strengthened socially and, eventually, economically. Furthermore, with this emphasis on interpersonal growth, cooperative problem solving, and cross-cultural understanding supported by formal institutional commitment, quality mentoring can help to create a university setting in which diversity is not only valued but expected.

REFERENCES

Abraham, A.A., *et al.* (eds) (1994). The Compact for faculty diversity. New England Board of Higher Education, Southern Regional Education Board, and Western Interstate Commission for Higher Education.

Aguilar-Gaxiola, S. (1984). The roles of mentors in the lives of graduate students. A paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Allen, W. (1988). Improving Black student access and achievement in higher education. *Review of Higher Education*, 2:403-416.

Altbach, P.G. and K. Lomotey (Eds). The Racial Crisis in American Higher Education. Albany: State University of New York Press, 1991.

Anderson, E.M. and A.L. Shannon (1988). Toward a conceptualization of mentoring. *Journal of Teacher Education*, pp. 38-42.

Arias, M.B. (1986). The context of education for Hispanic students: An overview. *American Journal of Education*, Vol 95(1), pp. 26-57.

Astin, A. (1985). *Minorities in American Higher Education.* San Francisco: Jossey-Bass.

Astin, A. (1985). *Achieving Educational Excellence: A Critical Assessment of Priorities and Practices in Higher Education.* San Francisco: Jossey-Bass.

Astin, A. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25, 297-308.

Astin, A. (1975). *Preventing Students From Dropping Out.* San Francisco: Jossey-Bass.

Astin, A. (1970). The methodology of research on college impact (I). *Sociology of Education*, 43, 223-254.

Astin, A. (1970). The methodology of research on college impact (II). *Sociology of Education*, 43, 437-450.

Astin, A. and R. Panos (1969). *The Educational and Vocational Development of College Students.* Washington, D.C.: American Council on Education.

Baird, L. (1988). The college environment revisited: A review of research and theory. *In*: J. Smart (Ed.), *Higher Education: Handbook of Theory and Research* (Vol. 4), New York: Agathon.

Baird, L. (1976a). Who goes to graduate school and how they get there. *In*: J. Katz and R. Hartnett (Eds.), *Scholars in the Making: The Development of Graduate and Professional Students.* Cambridge, MA: Ballinger.

Baird, L. (1976b). Structuring the environment to improve outcomes. *In*: O. Lenning (Ed.), *Improving Educational Outcomes* (New Directions for Higher Education No. 16). San Francisco: Jossey-Bass.

Baird, L., M. Clark, and R. Hartnett (1973). *The Graduates: A Report on the Characteristics and Plans of College Seniors.* Princeton, NJ: Educational Testing Service.

Banks, J.A. (1991). Multicultural literacy and curricular reform. *Educational Horizons.*

Berg, H. and M. Ferber (1983). Men and women graduate students: Who succeeds and why? *Journal of Higher Education*, 54, pp. 629-648.

Blackwell, J.E. (September-October 1989). Mentoring: An action strategy for increasing minority faculty. *Academe*, pp. 8-14.

Bolman, L.G. and T.E. Deal (1984). *Modern Approaches to Understanding and Managing Organizations.* San Francisco: Jossey-Bass.

Borg, W.R. and M.D. Gall (1989). *Educational Research.* New York: Longman.

Bova, B.M. and R.R. Phillips (1984). Mentoring as a learning experience for adults. *Journal of Teacher Education, Vol. XXXV*, No. 3, pp. 16-20.

Burke, R.J. (1984). Mentors in organizations. *Group and Organization Studies, Vol. 9* (No. 3).

Caplow, T. (1983). *Managing an Organization.* New York: CBS College Publishing.

Carter, D., C. Pearson, and D. Shavlik (Fall 1987–Winter 1988). Double jeopardy: Women of color in higher education. *Educational Record.*

Carter, D.J. and R. Wilson (1993). *Minorities in Higher Education. Eleventh Annual Status Report.* Washington, DC: American Council on Education, Office of Minorities in Higher Education.

Chickering, A. (1969). *Education and Identity.* San Francisco: Jossey-Bass.

Clawson, J.G. (1980). Mentoring in managerial careers. *In*: C.B. Derr (Ed.), *Work, Family and the Career. New Frontiers in Theory and Research.* New York: Praeger Publishers, pp. 144–165.

Coalition of Women Graduate Students (1993). *Improving the Climate for Women Graduate Students Through Quality Mentoring at the University of Minnesota.*

Collins, E. and P. Scott (July–August 1978). Everyone who makes it has a mentor. *Harvard Business Review*, pp. 89–101.

Daloz, L.A. (1986). *Effective Teaching and Mentoring. Realizing the Transformational Power of Adult Learning Experiences.* San Francisco: Jossey-Bass Publishers.

Daloz, L.A. (1983). Mentors: Teachers who make a difference. *Change*, Vol. 15(6), pp. 24–27.

Erikson, E.H. (1993). *Childhood and Society.* New York: W.W. Norton and Company.

Erikson, E.H. (1987). *A Way of Looking at Things: Selected Papers From 1930–1980.* New York: W.W. Norton and Company.

Erikson, E.H. (1982). *The Life Cycle Completed.* New York: W.W. Norton and Company.

Erikson, E.H. (1980). *Identity and the Life Cycle.* New York: W.W. Norton and Company.

Erikson, E.H. (1964). *Insight and Responsibility.* New York: W.W. Norton and Company.

Erikson, E.H. (1963). *Childhood and Society* (Second Edition). New York: W.W. Norton and Company.

Erkut, S. and J.R. Mokrus (1985). Professors as role models and mentors for college students. *American Educational Research Journal*, 21, pp. 399-417.

Estrada, L. F., F.C. Garcia, R.F. Macias, and L. Maldonado (Spring 1981). Chicanos in the United States: A history of exploitation and resistance. *Daedalus*, pp. 103-131.

Fagenson, E.A. (1989). The mentor advantage: Perceived career/job experiences of proteges versus non-proteges. *Journal of Organizational Behavior*, Vol. 10, pp.309-320.

Gavin, J.R. (1989). Issues and strategies in the retention of minority faculty and staff in higher education. In. W.E. Ward & M.M. Cross (Eds), *Key Issues in Minority Education.* Norman, OK: University of Oklahoma Press, pp. 55-77.

Gerstein, M. (1985). Mentoring: An age old practice in a knowledge-based society. *Journal of Counseling and Development*, Vol. 64, pp. 156-157.

Gilbert, L.A. (1985). Dimensions of same-gender student-faculty role model relationships. *Sex Roles*, 12, pp. 111-123.

Green, M.F. (1989). *Minorities on Campus: A Handbook for Enhancing Diversity.* Washington, D.C.: American Counci on Education.

Healy, C.C. and A.J. Welchert (1990). Mentoring relations: A definition to advance research and practice. *Educational Researcher, Vol. 19* (No. 9), pp. 17-21.

Hill, S.K. (1989). Mentoring and other communication support in the academic setting. *Group and Organizational Studies*, 14, pp. 355-368.

Hill, S.K., M.H. Bahniuk, J. Dobos and D. Rounir (1989). Mentoring and other communication support in the academic setting. *Group & Organization Studies*, Vol. 14(3), pp. 355-368.

Holland, J.W. (1994). Mentoring African American doctoral students. A paper presented at the Annual Diversity in Mentoring Conference, Atlanta, GA.

Howe, J. (October 1995). Personal communication.

Jacobi, M., A. Astin, and F. Ayala (1987). *College Student Outcomes Assessment: A Talent Development Perspective* (ASHE-ERIC Higher Education Report No. 7). Washington, D.C.: Association for the Study of Higher Education.

Jacome, Fred, *et. al.* (1990). *TALLY, Text Analysis Program, Version 3.0.* Computer software, distributed by Brown Publishing Company for Duke University Press National Collegiate, Software, 6697 College Station, Durham, North Carolina 27708.

Kauffman, S.A., D.F. Carter, and S. Hurtado (no date). The institutional climate for women and minority graduate students: Implications for degree progress.

Kidder, L.H. and M. Fine (1987). Qualitative and quantitative methods: When stories converge. *In*: Mark, M.M. and R.L. Shotland (Eds.) *Multiple Methods in Program Evaluation.* New Directions for Program Evaluation, No. 35. San Francisco: Jossey-Bass.

Klauda, P. and S.P. Kelly (1991). Minority population growth is changing face of state. *Star Tribune*, February 22, 1991, Minneapolis, Minnesota, p. 10A.

Knox, P.L. (1988). Mentoring women in academia. *Teaching of Psychology*, 15, pp. 39-41.

Kocher, E. and E. Pascarella (1988). *The Effects of Institutional Transfer on Status Attainment.* Paper presented at the meeting of the American Educational Research Association, New Orleans.

Kram, K.E. (1985). Improving the mentoring process. *Training and Development Journal*, Vol. 39(4), pp. 40-43.

Kram, K.E. (1983). Phases of the mentor relationship. *Academy of Management Journal*, Vol. 26(4), pp. 608-625.

Leatherman, C. (October 12, 1994). Number of Blacks Earning Ph.D.s Rose 15% in Year. *Chronicle of Higher Education.*

Leatherman, C. (May 13, 1992). After 10-Year Decline, Number of Black Ph.D.'s Begins to Increase, *The Chronicle of Higher Education*, Vol. XXXVIII, Number 36.

Levine, A. and Associates (1989). *Shaping Higher Education's Future. Demographic Realities and Opportunities 1900-2000.* San Francisco: Jossey-Bass.

Levinson, D. (1978). *Seasons of a Man's Life.* New York: Alfred A. Knopf.

Lincoln, Y.S. and E.G. Guba (1985). *Naturalistic Inquiry.* Beverly Hills: Sage Publications.

Loo, C.M. and G. Rolison (1986). Alienation of ethnic minority students at the predominantly White university. *Journal of Higher Education*, 57(1), pp. 59-77.

Magner, D.K. (July 26, 1989). 8 in 10 colleges have plans to boost minority presence. *The Chronicle of Higher Education.*

Melendez, S. and J. Petrovich (1988). Hispanic women students in higher education: Meeting the challenge of diversity. *In*: Pearson, Shavlik, and Touchton, Eds., *Educating the Majority: Women Challenge Tradition in Higher Education*, pp. 57-68.

Mercer, J. (May 4, 1994). Ambitious program aims to produce minority Ph.D.s. *The Chronicle of Higher Education*, p. A36.

Merriam, S. (1988). *Case Study Research in Education. A Qualitative Approach.* San Francisco: Jossey-Bass Publishers.

Merriam, S. (1983). Mentors and proteges. A critical review of the literature. *Adult Education Quarterly*, 33, pp. 161-173.

Merriam, S.B., T.K. Thomas, and C.P. Zeph (1987). Mentoring in higher education: What we know now. *Review of Higher Education, Vol. 11* (No. 2), pp. 199-210.

Miles, M.B. and A.M. Huberman (1994). *An Expanded Sourcebook. Qualitative Data Analysis* (Second Edition). Thousand Oaks, CA: Sage Publications.

Miles, M.B. and A.M. Huberman (1984). *Qualitative Data Analysis Sourcebook of New Methods.* Newbury Park, CA: Sage Publications.

Miller, K.E. (1994). *Recruitment for Graduation of Minority Graduate Students.* Proceedings from March 1994 forum.

Miller, T.E. and S.B. Brickman (1982). Faculty and staff mentoring: A model for improving student retention and service. *NASPA Journal,* Vol. 19, pp. 23-27.

Nettles, M.T. (1991). *Assessing Progress in Minority Access and Achievement in American Higher Education.* Denver: Education Commission of the States.

Nichols, M. (March 1994). Personal communication.

Noe, R.A. (1988). Women and mentoring: A review and research agenda. *Academy of Management Review,* Vol. 13(1), pp. 65-78.

Office of the Associate Vice President for Academic Affairs and Associate Provost with Special Responsibility for Minority Affairs (February 1995). *A Five-Year Progress Report on the Status of Students of Color: Enrollment and Graduation Rate.* Minneapolis, MN: University of Minnesota.

Orfield, G. (1989). Hispanics. *In:* Levine, A. and Associates. *Shaping Higher Education's Future. Demographic Realities and Opportunities 1900-2000.* San Francisco: Jossey-Bass.

Orfield, G. (November 1986). Hispanic education: Challenges, research, and policies. *American Journal of Education,* pp. 1-25.

Pace, C. (1984). *Measuring the Quality of College Student Experiences.* Los Angeles: University of California, Higher Education Research Institute.

Parsons, T. and G. Platt (1970). Age, social structure, and socialization in higher education. *Sociology of Education,* 43, 1-38.

Pascarella, E. and D. Chapman (1983). Validation of a theoretical model of college withdrawal: Interaction effects in a multi-institutional sample. *Research in Higher Education, 19,* 25-48.

Pascarella, E.T. and D.W. Chapman (1983). A multiinstitutional, path analytic validation of Tinto's model of college withdrawal. *American Educational Research Journal*, Vol. 20, No. 1, 87-102.

Pascarella, E., J. Smart, and C. Ethington (1986). Long term persistence of two-year college students. *Research in Higher Education, 24*, 47-71.

Pascarella, E. and T. Terenzini (1991). *How College Affects Students: Findings and Insights from Twenty Years of Research.* San Francisco: Jossey-Bass Publishers.

Pascarella, E. and P. Terenzini (1983). Predicting voluntary freshman year persistence/withdrawal behavior in a residential university: A path analytic validation of Tinto's model. *Journal of Educational Psychology, 75*, 215-226.

Pascarella, E. and T. Terenzini (1979). Interaction effects in Spady's and Tinto's conceptual models of college dropout. *Sociology of Education*, Vol. 52, pp. 197-210.

Pascarella, E. and L. Wolfle (1985). *Persistence in Higher Education: A Nine-Year Test of a Theoretical Model.* Paper presented at the meeting of the American Educational Research Association, Chicago.

Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods.* Newbury Park, CA: Sage Publications.

Redmond, S.P. (1990). Mentoring and cultural diversity in academic settings. *American Behavioral Scientist*, Vol. 34, No. 2, November/December 1990, pp. 188-200.

Richardson, R.C. and L.W. Bender (1987). *Fostering Minority Access and Achievement in Higher Education.* San Francisco: Jossey-Bass.

Richardson, R.C., H. Simmons, and A.G. de los Santos (May-June 1987). Graduating minority students: Lessons from ten success stories. *Change*, pp. 20-27.

Smith, D.G. (1989). *The Challenge of Diversity: Involvement or Alienation in the Academy?* Washington, D.C.: ERIC Clearinghouse on Higher Education.

Sodano, A.G., and S.G. Baler (1983). Accommodation to contrast: Being different in the organization. *New Directions for Mental Health Services*, 20, pp. 25-36

Stampen, J.O. and A.F. Cabrera (1988). The targeting and packaging of student aid and its effects on attrition. *Economics of Education Review*, 7, pp. 29-46.

Stoecker, J., E. Pascarella, and L. Wolfle (1988). Persistence in higher education: A nine-year test of a theoretical model. *Journal of College Student Development, 29*, 196-209.

Tabet, D. (May 18, 1994). Common Ground has network of mentors to benefit students. *U Women. The University of Minnesota Commission on Women*, Vol. 6, No. 1.

Tierney, W.G. and Y.S. Lincoln (1994). Teaching qualitative methods in higher education. *The Review of Higher Education*, Vol. 17(2), pp. 107-124.

Tinto, V. (1992). Student attrition and retention. *In*: Clark, B.R. and G. Neave (eds), *The Encyclopedia of Higher Education*, pp. 1697-1709.

Tinto, V. (1991). Toward a theory of doctoral persistence. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Tinto, V. (1988). Stages of student departure. Reflections on the longitudinal character of student leaving. *Journal of Higher Education, Vol. 59, No. 4*, 438-455.

Tinto, V. (1987). *Leaving College: Rethinking the Causes and Cures of Student Attrition.* Chicago: The University of Chicago Press.

Tinto, V. (1986). Dropping out and other forms of withdrawal from college. *In*: Noel, L., R. Levitz, D. Saluri, and associates, *Increasing Student Retention.* San Francisco: Jossey-Bass.

Tinto, V. (1982). Limits of theory and practice in student attrition. *Journal of Higher Education, Vol. 53, No. 6*, 687-700.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*, 89-125.

Trow, M. (1989). American higher education: Past, present, and future. *In*: Goodchild, L.F. and H.S. Wechsler (Eds.), *ASHE Reader on the History of Higher Education.* Needham Heights, MA: Ginn Press.

Turner, C.S.V. (1994). Guests in someone else's house: Students of color. *The Review of Higher Education*, Vol 17, No. 4.

Turner, C.S.V. and J.R. Thompson (1993). Socializing women doctoral students: Minority and majority experiences. *The Review of Higher Education*, Vol. 16, No. 3, pp. 355-370.

Turner, C.S.V. and J.R. Thompson (1992). Socialization experiences of minority and majority women doctoral students: Implications for faculty recruitment and retention. A paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Valadez, J.R. and R.P. Duran (1991). Mentoring in higher education. A paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Weinberg, M. (1977). Introduction: Race in American Education. *In*: *A Chance to Learn: The History of Race and Education in the United States.* New York: Cambridge University Press.

Wilson, R. (1992). *11th Annual Status Report, 1992 Minorities in Higher Education.* Washington, D.C.: American Council on Education. Office of Minority Concerns.

Yin, R.K. (1989). *Case Study Research. Design and Methods.* Sage Publications, Newbury Park, CA.

Zey, M.G. (1988). A mentor for all reasons. *Personnel Journal*, 67, pp. 46-51.

Zuckerman, H., J.R. Cole, and J.T. Bruer (1991). *The Outer Circle. Women in the Scientific Community.* New York: W.W. Norton and Company.

Zuckerman, H. (1977). *Scientific Elite. Nobel Laureates in the United States.* New York: Free Press.

APPENDIX A

INTERVIEW CONSENT FORM:

THE ROLE OF QUALITY MENTORING IN THE RECRUITMENT AND RETENTION OF WOMEN STUDENTS OF COLOR AT THE UNIVERSITY OF MINNESOTA

I agree to contribute to the above-named study by participating in a personal interview that will last about 60 minutes. I have been informed about the study's purposes, the general content of the interview, and the confidentiality of any statements that I make.

_____ (Interviewee signature)

_____ (Interviewer signature)

_____ (Date)

Name
Address

Dear XX:

As a doctoral student in Higher Education at the University of Minnesota, I am beginning research on my dissertation. My advisors are Dr. Karen Seashore Louis, chair, Department of Educational Policy and Administration, and Dr. Caroline Sotello Turner, assistant professor in the same department. For my dissertation I will investigate, contrast, and compare special programs that are designed specifically for the recruitment and retention of both undergraduate and graduate students of color into a variety of college/university programs. The mentoring process (or lack of it) will especially be investigated.

I am writing to you with a special invitation to participate in this very important research study. Your experiences, both positive and negative, will help to identify issues and concerns of particular importance to you. I am especially interested in the experiences of people such as yourself who are participating in the program as students, faculty, and administrators. Interviews are the best way to gather information about your perceptions and experiences.

I would greatly appreciate it if you would give me the opportunity to interview you this summer at a place and time that fits your busy schedule. Each interview will take approximately 30-45 minutes and all your comments will be completely confidential. The records of this study will be kept private. All participants will be coded to ensure confidentiality. No information shall be presented or published in any way that would permit identification of any individual or department. Please feel free to call me at (612) 624-0875 (office) or (612) 827-1621 (home) or write to me at the above address with any questions you may have.

I am very excited about this project and look forward to talking with you. If you agree to participate in this study, please sign this letter where indicated and mail back to me in the enclosed self-addressed campus envelope as soon as possible. Your participation is strictly voluntary. Your participation or nonparticipation will not effect in any way your relationship to the program or the University of Minnesota.

Thank you very much for considering being a part of this study. Not only will you be helping me, but more importantly, you will have the distinct opportunity to contribute critical information to an area of research that is desperately needed in higher education today. Further, I am confident that you may also personally benefit from my research because information from this project will be helpful in developing an understanding of the successes and failings of the various programs in existence for the recruitment, retention, and mentoring of students of color in institutions around the nation. I look forward to your positive response.

Sincerely,

Corinne Dickey

LETTER FOR STUDENTS

Corinne Dickey
Address
Address

Date

Name
Address
Address

Dear XX:

I am a graduate student conducting research on my dissertation in Higher Education. My research project is designed to help develop an understanding of the successes and failings of the various programs in existence for the recruitment, retention, and mentoring of students of color in institutions around the nation.

I am writing to you to request your help in collecting data for my dissertation. I would like to interview you to ask about your experiences, both positive and negative, and to help identify issues and concerns of particular importance to you. Experiences of students who are participating in programs such as yours are especially valuable. Interviews are the best way to gather information about your perceptions and experiences.

Please consider giving me the opportunity to do an interview with you this quarter at a place and time that fits your schedule. Each interview will take approximately 30-45 minutes and all your comments will be completely confidential. The records of this study will be kept private. All participants will be coded to ensure confidentiality. No information will be presented or published in any way that would permit identification of any individual or department. Please feel free to call me at (612) 624-5065 (office) or (612) 827-1621 (home) or write to me at the above address with any questions you may have.

I am very excited about this project and look forward to talking with you. If you agree to participate in this study, please sign this letter where indicated and mail back to me in the enclosed self-addressed campus envelope as soon as possible. I will then phone you to set up an appointment. Your participation is strictly voluntary. Your participation or nonparticipation will not effect in any way your relationship to the program or the University of Minnesota.

Thank you very much for considering being a part of this study. I look forward to your positive response.

Sincerely,

Corinne Dickey

APPENDIX B

Administrator Demographic Data

Name: _____

Campus Address: _____

_____

Phone: _____

Title at University of Minnesota: _____

Responsibilities of your position: _____

_____

How Long Have You Held This Position? _____

Degrees Earned:

Year	Degree	Major	Institution

Faculty/Mentor Demographic Data

Name: _____

Campus Address: _____

_____

Phone: _____

Title at University of Minnesota: _____

Responsibilities of your position: _____

_____

How Long Have You Held This Position? _____

Degrees Earned:

Year	Degree	Major	Institution

Student Demographic Data

Program:_____

Gender:_____ Age:_____ Ethnic Background:_____

State of Permanent Residence: _____

Are you a U.S. citizen? _____ Y _____ N

Marital Status:

Single	_____	Widowed	_____
Married	_____	Divorced	_____
Separated	_____		

Parental Background:

Mother:

Education _____

Employment _____

Ethnic Background _____

Father:

Education _____

Employment _____

Ethnic Background _____

What other colleges/universities did you attend?

Year	Institution	Major	Degree Earned

Were you recruited to come to the University of Minnesota?

_____ Y _____ N

Was the University of Minnesota your first choice?

_____ Y _____ N

If not, what school was your first choice and why didn't you go there? _____

_____

When did you enter your current study program? _____

When do you expect to complete your program? _____

Do you attend the University of Minnesota on a full-time or part-time basis? _____

How many credits do you usually take per quarter? _____

Will you receive or do you currently receive financial aid?

_____ Y _____ N

If yes, what kind of financial aid?

Scholarship _____ Teaching Assistantship _____

Fellowship _____ Research Assistantship _____

Has anyone else in your family pursued an academic degree?

_____ Y _____ N

If yes, who did and was the degree completed? _____

_____

Do you intend to pursue an academic career?

_____ Y _____ N

Why/Why Not? _____

_____

THANK YOU!!

APPENDIX C

ADMINISTRATOR INTERVIEW QUESTIONS

Program

1. I don't know much about the XXX program. Would you please describe the program in your own words?

   What are the goals?

   When did it start?

   Why did it start?

   Do you feel the program is accomplishing its goals?

Resources

1. What kinds of resources are available to the program (personnel, funds)?

2. In your opinion, is the program accomplishing its goals with the resources it has?

   If no, what additional resources are needed?

Communication

1. How is information communicated to program participants (both students and mentors)?

2. What suggestions do you have for improving communications?

Decision-Making

1. How are decisions about the program made?

   Who is involved in the decision-making process?

   How are they involved?

2. What suggestions do you have for improving the process?

Students: Recruitment/Transition/Relationships

1. How many students are involved in the program?

   Do you have more applicants to the program than you are able to serve?

   What happens to students who you are not able to accommodate?

2. How are students recruited to the University of Minnesota?

   Please describe the recruitment process.

   How do you advertise to students?

   What criteria do students need to meet?

   For what reasons are students turned away?

   Who is involved in the recruitment process?

   Who makes the final decision regarding selection of students?

3. How are students from other institutions prepared for making a transition to the University of Minnesota (academically, socially, emotionally)?

   Do you think students are adequately prepared for what they will experience here?

   If not, how could students be better prepared?

4. How are students matched with faculty and mentors?

5. In your view, what is the role of faculty and mentors in relation to students in the program?

Evaluation

1. How is the program evaluated?

2. What are the benefits of the program for students?

   For University of Minnesota faculty and mentors?

   For the University of Minnesota?

   For you as an administrator?

3. What kind of feedback have you had from students?

   From faculty/mentors?

   From the public?

Roles and Responsibilities

1. What is your role as administrator of this program?

   What are your responsibilities?

Initial Involvement and Expectations

1. How did you become involved as an administrator of this program?

2. Why are you participating in the program?

3. What were your expectations regarding the program before assuming the position of program administrator?

   Have those expectations been met?

   Have your expectations changed?

4. Have you had previous experience as administrator of a similar program?

Relationships with Students

1. What role do you play with students in the program?

   What are your responsibilities to students?

2. How much time do you spend with students?

Do you have any other comments about the program?

FACULTY/MENTOR INTERVIEW QUESTIONS

Program

1. Please describe the XXX program in your own words.

   What are the goals?

   When did it start?

   Why did it start?

   Do you feel the program is accomplishing its goals?

Resources

1. What kinds of resources are available to the program (personnel, funds)?

2. In your opinion, is the program accomplishing its goals with the resources it has?

   If no, what additional resources are needed?

Communication

1. How is information about the program communicated to you?

2. What suggestions do you have for improving communications?

Decision-Making

1. How are decisions about the program made?

2. Are you involved in the decision-making process?

3. What suggestions do you have for improving the process?

Roles and Responsibilities

1. What is your role as a faculty member/mentor in the program?

   What are your responsibilities?

Initial Involvement and Expectations

1. How did you become involved in the program?

2. Why are you participating in the program? (is your participation voluntary or mandatory?)

3. Why is your department participating in the program?

4. What were your expectations before participating in the program?

   Have those expectations been met or have they changed?

Relationships with Students/Mentoring

1. What role do you play with students in the program?

   What are your responsibilities to students?

2. How many students in the program are you mentoring?

3. How much time do you spend with these students?
   Is this one-on-one or in a group?
   In what ways do you promote the training of your student?
   The acquisition of knowledge?
   Professional work ethic?

4. Are you involved in student recruitment? How?

5. How are you matched with students in the program?

   What criteria are used?

6. How are students prepared for what they will experience academically and emotionally in the program?

   Are you involved in preparing students?
   Do you help brief students on how to cope with the university bureaucracy?

   Do you think students are adequately prepared for what they experience here?

   If no, how could students be better prepared?

7. What kind of feedback have you received from students about their experiences participating in the program?

   Do you provide emotional support if student is having problem?

8. Briefly evaluate your student's performance in his or her project with you.

   How do you correct mistakes of protege?

Benefits/Disadvantages

1. What are the benefits of the program for you?

   For your department?

   For students?

   For the University of Minnesota?

   Any disadvantages?

2. Do you plan to serve as a mentor again in this program?

3. Have you been involved in any other mentoring experiences? If so, how does this experience compare to your previous experiences?

Do you have any other comments about the program?

STUDENT INTERVIEW QUESTIONS

Program

1. I don't know very much about the XXX program. Would you please describe the program in your own words?

2. How did you find out about the XXX program?

3. Why did you choose to enter this program and what factors do you feel influenced your decision?

4. What are the goals of the program?

5. For you, how has the program accomplished its goals so far?

Recruitment Process

1. What was the recruitment process like for you?

2. Was adequate information about the program available to you both before and after your application was accepted?

3. Did you know anyone at the University of Minnesota or in this geographical area before you came here?

   Had you heard about the program from someone locally?

   Did you have a personal link with anyone before you came to the University? If yes, with whom? How were you influenced?

4. What was the application and admission process like for you?

5. What were your reasons for participating in the program?

   What were the positives?

   What were the negatives?

6. Did you visit the University of Minnesota prior to your decision to participate in this program?

Expectations

1. What were your expectations before coming to the University for this program?

   What led you to your expectations (what was the basis of your expectations)?

What did others tell you?

What did you read?

2. Have your expectations been met? If not, how have your actual experiences differed from your expectations?

   Were there any obstacles in the early stages of your program?

3. What are your impressions of the University of Minnesota so far?

   Probes: what are your impressions regarding:

   - students
   - faculty
   - administrators
   - institution
   - community

4. Did your experiences in this program change any preconceived impressions of the Twin Cities, Minnesota, or the University of Minnesota? If so, what specific changes come to mind?

5. What previous work experiences do you have?

6. What are your career goals?

   What do you plan to do when you complete your degree (this summer program)?

7. (Do you plan to go to grad school? If so, where? Which area?)
   How do you think this program will help you achieve your career goals?

Background/Culture/History

1. What was the name of your previous educational institution?

2. How was your previous institution similar to or different from the University?

   How have those similarities or differences affected you as a student?

   Probes regarding areas of similarities/differences (Note: Be sure to ask about these areas if student doesn't refer to them):

   Student relations:
   - relationships with other students
   - experienced discrimination from other students
   - have you made friends here?

Faculty relations:
- do you have a mentor? If so, how would you evalute your interaction with him/her?
If you do not have a mentor, is this something you feel is needed in this program?
- relationship with adviser/mentor
- relationships with other faculty members
- experienced discrimination from faculty
- do faculty address issues of student diversity in research and teaching?

3. What concerns did you have regarding the transition from your former institution to the University of Minnesota?

Socialization Process/Mentoring/Administration

1. How is important information communicated to you? Formally or informally? Written or verbally?

   Who provides the information?

2. Who do you think are (will be) your strongest sources of support (both personal and academic) during your participation in this program? Why?

3. Does this program have mentoring as part of its support structure? If so, please describe.
   What different parts of mentoring have you experienced? Which do you feel are most important?
   Does your mentor provide emotional support and encouragement in helping you cope during times of stress? Explain.
   Does your mentor help you cope with this university's bureaucracy?
   Do you look to your mentor as a role model? Why or why not?
   If not, would you like to see this added to the program? Please describe what you envision this mentoring process to include.

4. Do you participate in any extracurricular activities? Which ones?

Support

1. What financial support do you have to attend this program?

   Is it what you expected?

   Do you think it will be enough?

2. Who are your strongest sources of support (both personal and academic)? Why?

3. How can the Program/University better support you during your studies?

1. What are your plans after you finish your degree (this summer program)?

2. Please give a general statement that reflects your overall evalution of the program?

2. What changes, if any, would you suggest be made in the Program (publicity, application process and materials, selection process, program components, mentoring and other supportive networks, etc.)?